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ABSTRACT

Part of a series on the Hawaii Integration Project designed to facilitate integration of severely handicapped students, this guide presents strategies for leisure time integration. Following a discussion of rationale and assumptions in chapter 1, chapter 2 presents the interactive curricular model which views social competence as determined by social skills in conjunction with task skills needed to function in the community and satisfy basic human needs. Chapter 3 outlines an assessment process which includes the following steps: (1) identification of desired roles and environments, (2) observation of the student's present routines and activities, (3) discrepancy analysis of what is desired and what is occurring, (4) selection of the critical routines and activities, and (5) examination of the social skills embedded in the routines and activities to determine appropriate instructional objectives. The final chapter considers instructional strategies, with discussions of objectives, curriculum sequencing, and instructional programs (subdivided into antecedent, response, and consequence components). (CL)

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HAWAII INTEGRATION PROJECT

Social Skills Curricular Strategy
for
Students with Severe Disabilities

EC172528

SOCIAL SKILLS CURRICULAR STRATEGY FOR STUDENTS WITH SEVERE DISABILITIES

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Hawaii Integration Project
Department of Special Education
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TABLE OF CONTENTS

		Page
Introduction.		1
Chapter I	Rationale and Assumptions	3
Chapter II	The Interactive Curricular Model.	23
Chapter III	The Social Skills Assessment Procedure.	45
Chapter IV	Social Skills Instruction	67
References.		95
Appendix A	Social Skills Curricular Strategy Forms	101
Appendix B	Articles Describing Special Friends Program	117
Appendix C	SIOS Description and Data Analysis.	125

Introduction

This Social Skills Curricular Strategy for Students with Severe Disabilities has been developed from the programs initiated and sponsored by the Hawaii Integration Project (HIP), a three-year project funded by the U.S. Department of Education, Office of Special Education. The programs have primarily focused on the interactions between severely disabled students and nondisabled students during informal free (leisure) time in several of Hawaii's elementary and secondary public schools. The major goals of the project have been: a) to develop the social skills of both severely disabled and nondisabled children so that they can function in integrated school and community environments; b) to develop positive, mutually rewarding relationships between severely disabled and nondisabled children; and c) to develop training methods and materials to include severely disabled children in integrated activities for educators, administrators, parents, and others.

In addition to describing the Hawaii Integration Project, Chapter I of this manual presents strong reasons for teaching social skills to students with severe disabilities and the assumptions that special education teachers must hold in order to do so effectively. The concepts of social validity, integration, and independence, as they relate to social skills and severely disabled students, are explained and promoted.

Chapter II details the goal of this strategy: to comprehensively assess and program for an optimum set of social skills needed for a disabled individual to participate within roles of value and interest to him or her and society across integrated environmental settings. This approach views social competence as determined by social skills, in conjunction with task skills, that are needed to function in valued roles within an individual's community (across integrated present and future environments) and that satisfy his or her basic human needs. The Interactive Curricular Model in this chapter visually explains the relationships among these factors.

Chapter III outlines the process of assessing the social skills which a specific student needs to learn:

1. the identification of the roles and environments desired and valued by the disabled student, his or her parents/guardians, teacher, educational agency representative, and society;

2. the observation of the student's present routines and activities;

3. a discrepancy analysis between what is desired and what is occurring;

4. the selection of the critical routines and activities; and

5. the examination of the social skills embedded in these critical routines and activities to identify appropriate objectives for instruction.

The last chapter, Chapter IV, touches upon instructional strategies useful in teaching social skills. Instructional objectives, curriculum sequencing (based on the Individualized Curriculum Sequence), and instructional programs (subdivided into antecedent, response, and consequence components) are discussed. In the appendices that follow are blank forms which teachers may reproduce for use in their classrooms, journal articles about the project, and more HIP data on social interactions and skills of severely disabled students.

Chapter I

Rationale and Assumptions

The root word for "social" is the Latin socius, meaning "partner, companion, a sharing." Social skills, then, are attitudes and behaviors one acquires to successfully interact with other people. Except for rare exceptions, man is basically a social animal, spending a part, if not most of his time, with others of the same species. Some of these interactions may be very intense and personal, like sexual intercourse between two people. Others may be very weak and impersonal, like movement by many on a crowded street. And even when one is completely alone, one's thoughts and actions may be influenced by what "they" will think.

The impact that other people have on one varies, depending on the individuals involved, their relationships, the nature of the interactions, and so forth. But there is always some kind of influence exerted or received between or among members of a group interacting with each other. These social attitudes and behaviors may be subtle and discrete, perhaps even just an awareness that certain behaviors are expected or possible. For if one would feel and act exactly the same when one is with people as when one is totally alone, then one would have little need to learn and practice social skills.

In order to successfully handle the many and complex social interactions present in any given culture, one must develop the social skills needed to achieve what one wants and to satisfy the other or others in the interactions. These social skills, like the interactions they occur in, are generally culturally determined. In an ongoing evolutionary, and often unconscious process, the members of a community create various expectations, generally attached to specific roles and/or environments, for members of that group. A child instinctively seeks to satisfy his or her hunger with whatever food is present, but the child is soon made aware that a family dinner involves more than meeting a physiological need and manipulating eating utensils. In some cultures, the fork is usually returned to the right hand after the knife is used: in other cultures, the fork remains in the left hand for awhile longer. And in other places, of course, chopsticks or fingers prevail. Depending on the family's social rules, a particular group member should or should not talk during the meal, is expected to pass the serving dishes to others or is encouraged to reach over others and grab for him or herself, and so forth. If that group member doesn't behave according to the family's social rules, his or her behavior may be tolerated, especially if he or she is young or infirm, or he or she may be reprimanded with a mother's admonition, a raised eyebrow, a remark that he or she is not behaving properly. And when that group member is surrounded by strangers in a restaurant, the social rules and consequences may differ from the ones in the home, but if he or she has been taught well, he or she shifts, adapts, and behaves accordingly.

Rationale for Teaching Severely Disabled Students Social Skills

Among the domains of instruction for disabled students, social skills is perhaps the most critical domain. Data indicate that social skills can significantly predict the restrictiveness of placement from early childhood through adulthood. Maladaptive social behaviors, such as aggression, noncompliance, or self-injurious behavior, are clearly associated with institutionalization. Schalock, Harper, and Genung (1981) find that poor social skills are a major reason for referrals for institutionalization. On the other hand, appropriate social behaviors significantly correlate with professional team decisions in selecting institutionalized individuals for community placement (Vitello, Atthowe, & Cadwell, 1983). In studies investigating institutionalization (Crawford, Aiello, & Thompson, 1979; Gollay, 1976; Gottesfeld, 1977; Heal, Sigelman, & Switzky, 1978; Intagliata & Willer, 1982; Jacobson & Schwartz, 1983; Keys, Boroskin, & Ross, 1973; Moen, Bogen, & Aanes, 1974; Pagel & Whitling, 1978; Schalock et al., 1981; Sutter, Mayeda, Call, Yanagi, & Lee, 1980), the necessity of appropriate social skills for successful and maintained community placement are identified repeatedly and consistently.

Studying the factors associated with successful regular kindergarten placement of disabled students, Vincent, Salisbury, Walter, Brown, Gruenwald, and Powers find that social skills (e.g., following group instructions, waiting for a turn, working independently), rather than specific pre-academic task skills (e.g., counting, identifying alphabet letters, fine-motor skills), were the "survival skills" predictive of kindergarten success. Likewise, vocational survival skills for adolescent and adults with disabilities are primarily social rather than task-related skills (Johnson & Mithaug, 1978; Mithaug & Hagmeier, 1978; Miziol & DeBlassie, 1972; Rusch, 1979). These preschool and vocational studies, in conjunction with the institutionalization research, indicate that the most important skills for success in a community are social in nature. It is, therefore, imperative that a valid curriculum for severely disabled students include training in socially appropriate behaviors.

The Hawaii Integration Project

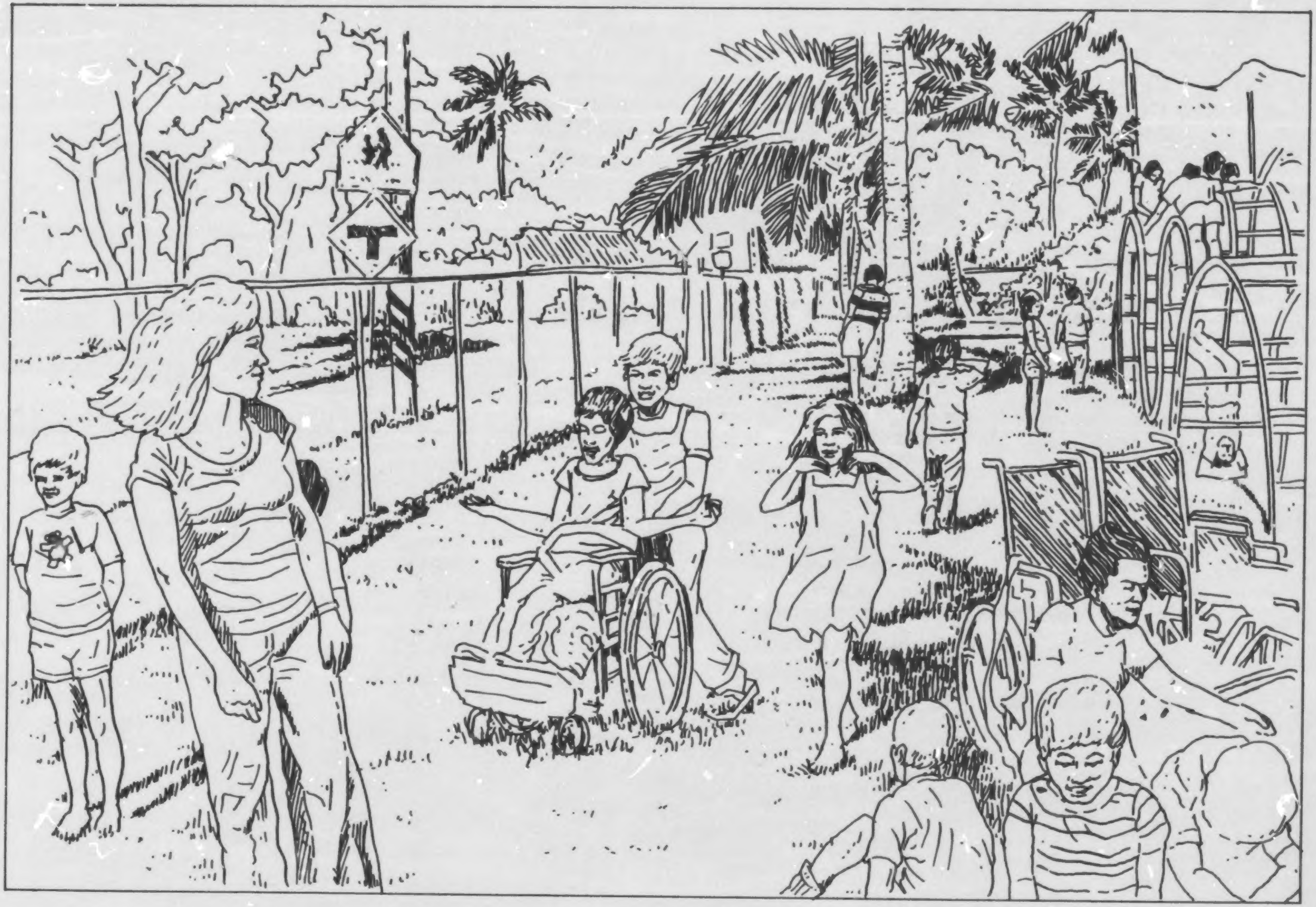
The Hawaii Integration Project (HIP) is a model demonstration project which has been funded by the Office of Special Education, U.S. Department of Education for three years to develop curriculum components, activities and materials which promote the integration of severely disabled children/youth into school and community settings. The Hawaii Integration Project has three major goals: a) to support the development of social competence by both severely disabled and nondisabled children, such that they acquire the social performance skills to successfully function in integrated community environments; b) to develop positive, mutually rewarding relationships between severely disabled and nondisabled children which will generalize to non-school environments and maintain over time; and c) to develop training methods and materials to prepare educators, administrators, state and community agency staff, parents, and nondisabled students to include severely disabled students in integrated activities.

In order to accomplish the first two goals, HIP has focused upon providing severely disabled and disabled students the opportunity to develop friendships in leisure-time periods (e.g., recess, lunch) during school and non-school hours as the context for the development of social interaction skills. Most integration programs utilize the nondisabled child as a tutor or helper in instructional activities with the severely disabled child. While such relationships can benefit both groups, we feel that interactions in which one child is the giver and the other child is the taker usually result in inequitable unidirectional relationships. The social skills students have the opportunity to learn or use in the helper-helpee or teacher-student roles are quite different from the skills displayed in a friend role. Reciprocal friendships provide individuals the opportunity to acquire the social and communication skills necessary to engage in mutually rewarding and enjoyable relationships with one another. In addition, such friendships intensify commonalities among people and minimize the differences that can be inferred from a person's race, culture, socio-economic background or disabilities. A comprehensive description of the Hawaii Integration Project's program for promoting social interaction between severely disabled and nondisabled students in integrated settings can be found in

The Special Friend's Program: A Trainer's Manual for Integrated School Settings (Voeltz, Hemphill, Brown, Kishi, Klein, Fruehling, Levy, Collie, & Kube, 1983).

Research conducted by HIP has consistently shown significantly higher acceptance of individual differences by nondisabled students in schools where reciprocal peer-interaction interventions with severely disabled students were facilitated than in schools with no severely disabled students or schools with severely disabled students and no interaction program (Voeltz, 1980, 1982; Hemphill & Voeltz, 1981, 1982). More pertinent to this manual is the project's research on changes in the social skills of severely disabled children. The Social Interaction Observation System (SIOS) was designed to monitor seven major categories of behavior for both the disabled and nondisabled persons involved in an interaction, including information on over forty-four individual behaviors (Voeltz, Kishi, & Brennan, 1981). Throughout the fourteen-month period beginning November, 1981, through May, 1983, disabled-nondisabled peer dyads were observed, with six severely disabled students observed consistently, and compared with teacher-child dyads. Analysis of the data from these observations indicate repeatedly that the interactions between the nondisabled and disabled children did affect the behavior of the disabled children, and that these effects were frequently different from those produced in interactions with teachers. Furthermore, data indicate that the effects were generally individualized (i.e., they were fairly consistent for individual disabled children), but that the effects varied considerably from child to child, as would be expected.

Correlations were found between the affect of the nondisabled peers



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and the behavior of the severely disabled ones. When both peers were at the same eye level, some positions were more conducive to various behaviors (e.g., more orientation to object, more purposeful movement) of the severely disabled peer. If the nondisabled peer were at a higher eye level, other kinds of behaviors were encouraged or made impossible. When the nondisabled peer was smiling, one disabled child exhibited more orientation to the nondisabled peer and was much less neutral in affect (e.g., more smiling). Whether or not the nondisabled child was oriented to the disabled peer also appeared to have different effects upon the behavior of the disabled child. When a nondisabled child was looking at one severely disabled child, he was more oriented to objects, had less distress affect, less passive movement, more accidental touch, less positive touch, more reaching for objects, and less inappropriate play. There was also a pervasive positive effect upon the disabled child when the nondisabled peer looked at the object. (A complete description of the six severely disabled students' behaviors as observed on the SIOS is in Appendix C.)

Assumptions of the HIP Social Skills Curricular Strategy

In order to integrate the Social Skills Curricular Strategy for Students with Severe Disabilities effectively into the teacher's present practices and procedures, three basic assumptions must characterize the curriculum that is presently adhered to in the classroom:

1. The students' individualized curricula must be educationally valid.

2. Opportunities for interactions between students with severe

disabilities and their nondisabled peers or other individuals must be available and encouraged.

3. Important in the life-planning process is the promotion of independence and decision-making by the students.

Educational validity

Voeltz and Evans (1983) promulgate that appropriate programs for students with severe disabilities should have "educational validity," a concept that includes "internal validity," "educational integrity," and "empirical and social validity." The first two criteria, internal validity and educational integrity, require that the instruction be systematic, consistent, and objectively monitored. This is to ensure that the behavior change can be evaluated in relation to the educational intervention, and that the educational intervention occurs as specified in the treatment plan. Empirical and social validity, the third criterion, requires that the behavior change be meaningful and valuable, not only for the student in present and future environments (empirical validity), but also for the significant others in those environments (social validity). The behavior change should also be directed towards the student's independence and self-fulfillment in as many of the most natural and least restrictive environments possible and should contribute to the attainment of roles that are socially valued.

In order for a social skills curriculum to meet the criteria for educational validity, the following guidelines for instructional objectives, methods, and arrangements should be followed:

1. Instructional objectives, tasks, and materials must be functional and age-appropriate. Although a student's developmental level may be at

an infant or toddler level, that does not preclude instruction that is meaningful, useful, and appropriate to the student's chronological age. For example, rather than teaching a twelve-year-old to grasp and shake a rattle, the student could be taught to grasp a toothbrush and brush his or her teeth (Brown, Nietupski, & Hamre-Nietupski, 1976; Guess Horner, Utley, Holvoet, Maxon, Tucker, & Warren, 1978).

2. Instructional objectives must be relevant to present and future environments in integrated, natural settings. "The criteria of ultimate functioning," (i.e., what is needed to function as "productively and independently as possible in integrated adult environments"), is an excellent standard for selecting objectives that relate to future integrated environments (Brown et al., 1976, p.2). For example, it is probably more relevant to teach a student to hang up a jacket on a hanger and place it in a closet than it is to place the jacket in a classroom "cubby."

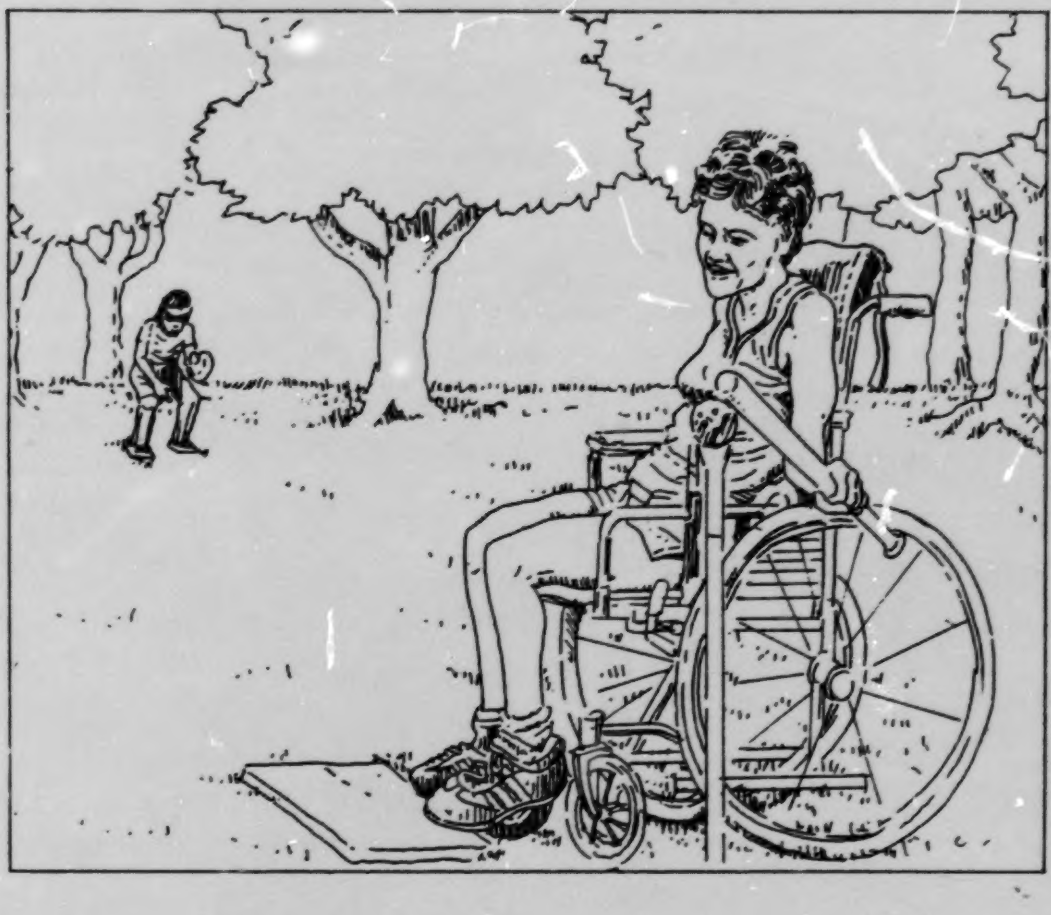
Vincent et al.(1980) find it difficult to use this criteria with disabled preschool students because it is difficult to predict what the future adult environments will be for three-and-four-year olds. Vincent et al. therefore extend the criteria of ultimate functioning downward and describe "the criterion of the next environment." For many such disabled three-and-four-year olds whose next optimal environment might be a regular public school kindergarten class, a relevant objective would be following instructions given to the entire class or working independently for ten minutes on an activity.

3. Instructional objectives and educational situations may reflect "the principle of partial participation," but such partial participation

by the disabled student must be meaningful and perceived as valuable by others. Baumgart, Brown, Pumpian, Nisbet, Ford, Sweet, Messina, and Schroeder (1982) define the principle of partial participation as:

> Being able to perform at least partially as many different skills, to engage in as many different activities, and to function in as many different environments as instructionally possible. The attainment of this goal is more acceptable than one that does not (p. 20).

Partial participation is an important consideration for students who have severe and/or multiple disabilities because it expands the range of potential educational objectives for them. For example, a student who is unlikely ever to attain all the skills necessary to shop independently for groceries may still be able to partially participate in this activity by selecting preferred items in the supermarket.



4. Instruction should occur primarily in the context of daily routines and skill sequences, rather than in artificial massed-trial training situations. The instructional procedures for teaching severely disabled students were originally derived from research on behavior modification. The purpose of the research was to investigate human behavior, not to develop curriculum; the training situations were usually artificial, involved many repeated trials, and developed with little consideration for the functionality or the relationship of the skills taught to the needs of the student in natural environments. Recently, however, curriculum development has shifted to a model of

teaching skills in clusters or functional sequences as the skills are needed or occur naturally (Holvoet, Guess, Brown, & Mulligan, 1980). Teaching a severely disabled student to respond to "let's eat lunch" daily at 11:30 a.m. by walking to the cafeteria and then signing a request for lunch in the cafeteria is a much more meaningful instructional situation than teaching that student to walk for five minutes during a daily physical therapy session and to sign "lunch" ten times during the language skills period at 9:35 a.m. on Mondays, Wednesdays, and Fridays.

5. *Instructional arrangements must include group as well as individual instruction*. Given the viability of group instruction for teaching severely disabled students (Alberto, Jobes, Sizemore, & Doran, 1980; Brown and Holvoet, 1983; Favell, Favell, & McGimsey, 1978; Storm & Willis, 1978), exclusive use of one-to-one instruction is not appropriate. Such individual instruction results in an unnecessarily high proportion of the student's school day spent in "downtime" while the teacher instructs each student one by one. Individual instruction also provides very little opportunity for incidental learning or systematic instruction in peer interaction skills. Group instruction, on the other hand, maximizes the instructional time a teacher can give to all of the students in the class and creates situations for incidental learning and instruction in social skills. Most importantly, group instruction is the most frequently used instructional arrangement of educational environments that are less restrictive.

Interaction with nondisabled persons

The second assumption of the Social Skills Curricular Strategy is that there must be opportunities for students with severe disabilities to interact with nondisabled peers or other individuals. However, interaction simply for the sake of interaction is not sufficient (Baumgart et al., 1983; Voeltz & Evans, 1983). The objectives and methods of these interactions should enhance the value of the disabled persons as perceived by the community.

Bricker (1978) formulates a rationale for integrating disabled and nondisabled preschoolers, and it is applicable as a rationale for interactions among disabled and nondisabled individuals of all ages. Bricker presents her arguments under three major categories: social-ethical, legal-legislative, and psychological-educational.

Social-ethical arguments. These arguments focus primarily on societal attitudes about disabled persons, the deleterious effects produced by social segregation, and the efficient use of societal resources. In arguments for integration or opportunities for interaction, it is suggested that positive or accepting attitudes of nondisabled individuals towards disabled individuals cannot be expected or taught if the nondisabled individuals never encounter disabled individuals. Without such opportunities, it is understandable that many attitudes in the society are negative and perceptions about individuals with disabilities are often inaccurate. Brown, Branston, Hamre-Nietupski, Johnson, Wilcox, and Gruenwald (1979) suggest an even more compelling reason for affecting positive or accepting attitudes among nondisabled students: the nondisabled students are the service providers and parents of the disabled students of tomorrow.

Several investigations have found that interactions among nondisabled and disabled students result in more positive attitudes of the nondisabled students (McHale & Simeonsson, 1980; Rynders, Johnson, Johnson, & Schmidt, 1980; Voeltz, 1980, 1982). Furthermore, Voeltz (1980) notes that in schools having both special education and regular education classes, but without opportunities for interactions between special education and regular education students, the nondisabled students are more accepting of differences among peers than nondisabled students who attend schools without any special education classes.

Bricker (1978) also indicates that integration has the potential of altering societal attitudes through not only changes in peers' attitudes but also changes in the attitudes of parents of nondisabled peers, parents of disabled students, regular education teachers, and special education teachers. Such a shift in attitudes has the possibility of improving the attitudes of disabled students towards themselves. And such improvements in self-images are important because it has been demonstrated that negative labels produce deleterious effects (Ysseldyke & Algozzine, 1982).

The final social-ethical argument for integration is suggested by both Bricker (1978) and Brown et al. (1979): it is a more efficient allocation of resources to educate disabled and nondisabled students in the same school. For example, segregated schooling requires the unnecessary duplication of many staff roles, such as administrators, secretaries, cafeteria workers, janitors, etc. Because of declining enrollments, many school buildings are only being partially used now. If enrollments could be made larger with the integration of disabled and nondisabled students, then perhaps some of these buildings could be used for other purposes and the upkeep of all the buildings would be more cost effective.

Legal-legislative arguments. These arguments have already been well established. The initial right-to-education cases mandated that education be provided in the most normalized educational settings as possible and that it be provided by the public school system (cf. Pennsylvania Association for Retarded Children vs. Commonwealth of Pennsylvania, 1971; Maryland Association for Retarded Children vs. Maryland, 1974; Mills vs. D.C. Board of Education, 1972). The decisions in these cases were based upon the civil rights case of Brown vs. Topeka Board of Education, which rules that separate and segregated schooling was unconstitutional. Clearly, it was the intent of the right-to-education rulings that public school education for disabled students be provided in the regular public schools.

Legislative support for integration and the opportunities for interaction among disabled and nondisabled students was precisely delineated in Public Law 94-142, the Education of All Handicapped Children Act of 1975, and in Section 504 of the Rehabilitation Act of 1973. P.L. 94-142 and Section 504 each defined the concept of the least restrictive environment to include integration and opportunities for interaction to the maximum extent possible as part of an appropriate education plan. Section 504 further stated that architectural barriers were no longer acceptable reasons for excluding disabled students or individuals from programs.

Psychological-educational arguments. Based on her experiences with one of the first integrated intervention programs for disabled and nondisabled preschoolers, Bricker (1978) suggests that an integrated environment may be educationally superior to a segregated environment because an integrated one may create more demanding and motivating situations for the disabled students. Obviously, the presence of more competent peers can provide a greater opportunity for the disabled students to learn through observation and imitation (Bricker, 1978; Brown et al., 1979; Stainback, Stainback, & Hatcher, 1983). Concerns that the nondisabled students will imitate and adopt maladaptive behaviors of the disabled students are not substantiated by the research (Bricker, 1978). Many of the early studies on integration and interaction of disabled and nondisabled students investigated the use of nondisabled students as peer tutors. Most of the studies reported that such tutoring was successful; however, its success has not been adequately demonstrated with severely disabled students (Guralnick, 1976).

Other arguments for education in integrated settings concern the validity of instruction for disabled students. Brown et al. (1979) and Brown, Ford, Nisbet, Sweet, Donnellan, & Gruenwald (1983) point out that goals and objectives that are related to functioning in the natural environment cannot be effectively taught in a segregated environment because the segregated situation is unlike any natural environment. Additionally, segregated environments do not meet the educational needs of severely disabled students who are characterized by significant difficulties in generalization. Brown and his colleagues (1983) also emphasize that it is logical to provide opportunities for interaction among disabled and nondisabled students in their neighborhood schools because both groups of children share the same social environment, the same neighborhood and community outside of school time.

Movement towards independence and decision-making

The third assumption of the Social Skills Curricular Strategy is that students with severe disabilities should be as actively involved in their education as possible rather than being passive students for whom the teacher or parent makes all the decisions. For if these students are ever to function as independently as possible in society, they must now be trained to do so.

Curricula for severely disabled students have generally reflected a belief that these individuals can move only a limited, if any, distance on a continuum from total dependence and no decision-making to total independence and total decision-making. This belief and comments such as, "but my students are so severely disabled that they are the exceptions," or "you must be talking about higher functioning severely disabled students," are self-defeating attitudes and self-fulfilling prophecies which a teacher should avoid. Recognizing a student's potential growth towards independence, particularly for students who are severely disabled, is open to more speculation now than at any previous time because of advances in educational methodology, mechanical and electronic technology, and societal values. It has been demonstrated that students who are severely disabled can make decisions and may have preferences (Holvoet, Brewer, Mulligan, Guess, Helmstetter, & Riggs, 1983). Data regarding the effects of reinforcement choice and task choice indicate that learning among severely disabled students is not adversely affected, and is sometimes slightly better and faster, when choices are available (Alexander, 1974; Holvoet et al., 1983; Lovitt & Curtis, 1969).

Based on these studies and the inalienable rights of anyone who lives in a democratic society, it is incumbent upon the teacher to be rid of any preconceived notion as to how far an individual student may move toward total independence and total decision-making. Furthermore, the teacher must also identify and assist the student to expand upon his or her ability to be self-sufficient and make his or her own decisions.

In summary then, we the authors of this manual and the Hawaii Integration Project firmly believe that all persons of a community belong in an integrated community and that they all can benefit from the interactions they experience. This manual is an effort to share with special education teachers ideas and procedures to realize these beliefs.

Chapter II

The Interactive Curricular Model

The Social Skills Curricular Strategy for Students with Severe Disabilities is based on the conceptual framework depicted in Figure 2.1. The Interactive Curricular Model for Life Planning consists of three interactive components: roles, environments, and basic human needs. Consideration of these three components and their interrelationships is critical to all life planning efforts, not only for persons with severe disabilities but also for nondisabled persons. Successful performance and participation within roles valued by the individual and his or her society in natural environments leads to the attainment of basic human needs (e.g., self-preservation, self-identity, feelings of worth, and overall motivation and purpose in life). Roles provide socially acceptable and valued opportunities in one's culture to actualize one's unique strengths and talents and to demonstrate competence and usefulness to one's self and others (Stodden, 1982).

Roles

A typical way of viewing or describing one's self is through the roles one assumes in life. This is most obvious when people meet for the first time. One usually introduces oneself as, "I'm Mary Doe and I'm a lawyer," or "I'm Joe, Frank's brother." Roles not only give a person identity, but roles also provide structure in a person's life in terms of what one does, how one schedules one's time, what one wears, says, feels, how others regard that person, and so forth. There are many types of roles, they may often overlap and blend into each other, and a

Figure 2.1

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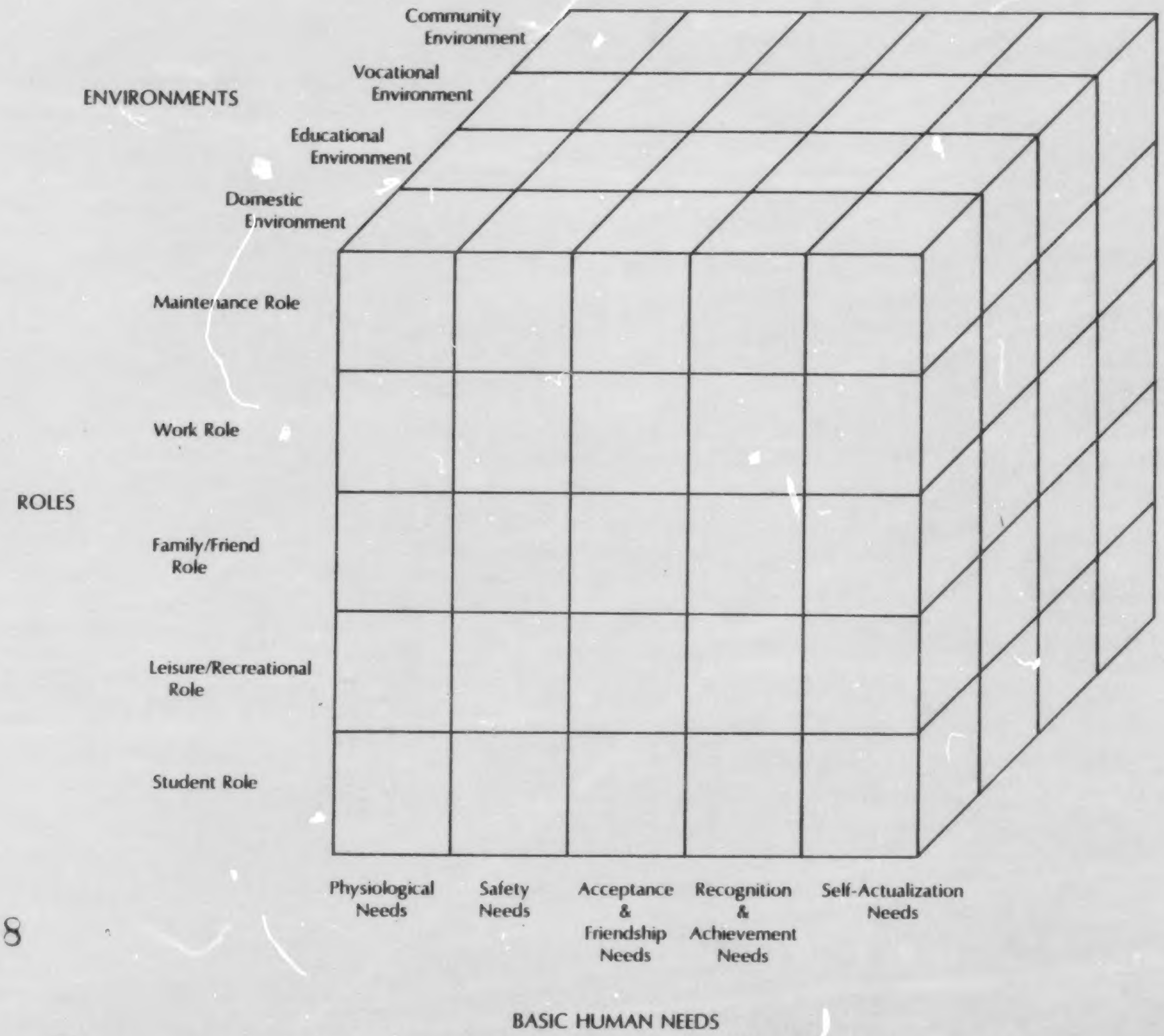
Interactive Curricular Model for Life Planning


ENVIRONMENTS
Community Environment
Vocational Environment
Educational Environment
Domestic Environment
ROLES
Maintenance Role
Work Role
Family/Friend Role
Leisure/Recreational Role
Student Role
Physiological Needs
Safety Needs
Acceptance & Friendship Needs
Recognition & Achievement Needs
Self-Actualization Needs
BASIC HUMAN NEEDS

Hemphill, Noonan, and Levy; 1983

person can and often does engage in several roles at the same time. Nevertheless, some of the more important roles valued in this culture have been singled out: maintenance role, work role, leisure or recreational role, family or friend role, and student role.

Maintenance roles generally relate to taking care of and maintaining one's self (e.g., toileting, dressing, eating) and one's possessions (e.g., clothes, tools, car). While it may be work to maintain one's self and possessions, and while much physical or mental labor may be required to fulfill the other roles listed, the work role is defined as paid employment because the paycheck that one receives for such work, whatever that work may be, produces different feelings, expectations, etc. than does the same work without such a concrete and visible reward. Once this requirement is met, the possibilities of work roles are practically endless--waiter, teacher, computer programmer, corporation president, laborer, baseball player, and so forth. A leisure or recreational role is generally defined as something one does for personal fun and enjoyment in one's spare, non-working time. However, the distinction between a work role and a leisure role can be difficult to make if a paid baseball player or corporation president also likes to do the same "work" activities during his or her leisure time.

Concerning one's family roles, one is born into certain roles (e.g., the oldest child of a given set of parents) or acquires them as one goes through life (e.g., sister, cousin, wife, mother, in-law). While one's role as a friend may last as long as these family roles tend to, there is usually more choice and flexibility in the selection and maintenance of friendships.

Childhood, adolescence, and, for some, young adulthood are the typical times to occupy the student role. The student role, therefore, is generally a role of limited duration. And while it may be easy to identify a person as a student, the actual skills one needs to be a student are perhaps less clear than the skills needed in other roles. For these two reasons, the student role makes little sense for severely disabled individuals if it is viewed as time learning the skills necessary to be a competent student (e.g., attends to task at hand, controls impulses, sits quietly in a group, etc.). Obviously the validity of teaching these kinds of skills in isolation and not within the context of functional routines essential to roles other than the student one, would be questionable. However, when viewed in the context of learning skills which can lead towards competence in valued maintenance, work, leisure/recreational, family/friend roles, then the student role, especially for severely disabled students, takes on educational validity. For in school, students with severe disabilities can be given the time and assistance they need to learn and practice the skills needed for participation in valued roles in the larger society.

The selection of present and future roles rather than goals that lead to ultimate functioning in multiple environments (Brown et al., 1979) offers parents, guardians, teachers, educational representatives and the disabled individual a more identifiable and definable approach to life planning. Parents or guardians, reflecting on the roles they have chosen for themselves and the roles they value, can readily say, "I want my child to have friends and when he grows up, a job." At this point begins the process of identifying the skills the child has now and needs to have to become competent for partial or full participation in a role. In contrast, asking a parent, and even many teachers, to identify an objective or goal he or she sees as leading to competence in a full range of environments is understandably a difficult approach to life planning. Life planning through the selection of roles of value and interest to the disabled person, his or her parents/guardians, teacher, educational representative, and others is a critical step toward insuring the social and empirical validity of educational programs.

Environments

An environment is an aggregate of a setting (e.g., place, landmark, building), the equipment in the setting (e.g., resources, tools, furnishings), and one's intent or role in that setting. A kitchen setting is a typical example of a domestic environment. It is a place where one may cook dinner in order to maintain one's self, using the various furnishings (table, chairs, sink, stove) and tools (forks, knives, pots, pans) typically found in a kitchen. A school can also simulate a domestic environment if the classroom has the necessary equipment and if the individual's intent is to fulfill a domestic role, such as learning how to cook a dinner in a home economics class. Even a campground can be turned into a domestic environment when one brings out the equipment from home, builds a fire, cooks a fish caught from the nearby stream, and eats it.

Just as different settings can be turned into similar environments, one setting can function as a variety of environments. For example, the kitchen that was described as a domestic environment can also become a vocational environment--if one's paperwork from the office is done while sitting at the kitchen table. The kitchen may then quickly change into an educational environment if one's children interrupt with pleas to help them with their homework.

In the Interactive Curricular Model for Life Planning, four environments are listed: domestic, vocational, educational, and community. Domestic environments have a household orientation, vocational environments are places where employed individuals do work-related tasks, and educational environments are settings where individuals are educated. Community environments are more difficult to define because they are both inclusive and exclusive. All settings are physically located within a community and are, therefore, community settings. Yet community environments are defined in this model as any place where the equipment and intent are for any purpose other than domestic, vocational, or educational. In general, these intents cluster around roles played by persons as citizens or taxpayers of a community. Some examples of such community-oriented activities are going to the police station to apply for a driver's license or attending services in a church.

Basic Human Needs

The need for food, safety, protection and care, the need for affection and love, the need for status, respect and self-respect, and the need for self-fulfillment of potentialities have been widely recognized as life-motivating and sustaining factors (see Table 2.2 on page 29). If one is able and allowed by one's society to fulfill these basic needs, then one is usually judged to be living a "full" life.

Table 2.2 HAWAII INTEGRATION PROJECT 1983

Summary of Maslow's Basic Human Needs*

Physiological Needs:	These needs pertain to organic or bodily processes of an organism and include eating, sleeping, physical activity or exercise, hygiene, sexual desires, etc.
Safety Needs:	These needs focus on stability, protection, security, structure and order, and freedom from fear, anxiety, and chaos. People generally have a preference for a safe, organized, predictable world where unmanageable, unexpected, or dangerous things do not frequently occur.
Acceptance and Friendship Needs:	In general, people long for affectionate relationships with others of their species. Individuals will strive to obtain acceptance, love, and friendship from their families, other individuals or groups. Without such relationships, people can feel lonely, rejected, unwanted, or unneeded.
Recognition and Achievement Needs:	These needs include a desire for self-respect and self-esteem, as well as a desire for the respect and esteem of others. At one level, people have the need for achievement, adequacy, mastery, competence, and independence. They gain self-respect through their accomplishments, competence on tasks and/or by being able to take care of themselves. At another level, individuals also want to be recognized by others for their achievements. This recognition gives people status, feelings of importance, dignity, and worth. When these needs are not met, people may feel helpless, weak or inferior.
Self-Actualization Needs:	These needs are ones that people want for themselves and by themselves. Rather than being unduly influenced by what others or society desire for them, people need to maximize their desires and potential.

*A.H. Maslow, Motivation and Personality (New York, 1954).

Most people who live in democratic, capitalistic societies expect, perhaps even demand, that their basic needs can be met, usually by a combination of individual talent, hard work, and luck. Severely disabled persons also have these same basic needs, but, like many other minority groups, their opportunities to fulfill these needs have been limited. Programs and planning for individuals with severe disabilities have usually concentrated primarily on their physiological and safety needs. Only recently are such individuals gaining access to roles and environments which enhance the possibilities for the fulfillment of the full spectrum of the basic needs.

Maslow (1954) views the basic needs as hierarchical, and yet he recognizes that a person's need for, say, recognition may sometimes outweigh his or her need for food or safety. The Interactive Curricular Model for Life Planning, while recognizing that these needs are usually hierarchical in nature, emphasizes the possible attainment of all or many of these needs simultaneously. This emphasis seems particularly important when considering the need to maximize one's self or self-actualize. Self-actualization is a process of becoming whom one wants to be. Critical to this process is not only the kind of person one becomes, but also how one becomes this person. Learning about one's self, one's needs, one's options--and being allowed to make the decisions that affect one's life, these are all part of the self-actualization process. And the more decisions one makes and the more active control one has over one's life, beginning with the single first decision and leading to many more decisions, the greater the possibility for self-actualization. Conversely, the more decisions made for an individual by others and the more passive one is, the less likely self-actualization is to occur.

Viewed from this perspective, the process of self-actualization does not occur after all the other basic needs have been met. Rather, the self-actualizing process is occurring, or not occurring, while the other needs are being met. For example, as a child is being taught to feed or toilet him or herself, the child may or may not be allowed to make decisions about what he or she is doing and how he or she is doing it. As the child grows older, the options and his or her responsibility for making decisions should increase proportionately. In choosing a work role, an individual ideally would be given the opportunity to explore a wide variety of career options, then investigate several options in depth while integrating these experiences with personal goals, needs, etc. (Stodden, 1981), and finally he or she would choose a work role. The probability of self-actualization through this process seems much more likely than the selection of a work role heavily influenced by what parents want for their child or by what career options are deemed appropriate by teachers or counselors.

As discussed in the assumptions in Chapter I, there is the tendency to view persons with severe disabilities as always remaining children whose options are very limited and whose decisions should be made by others. Indeed some persons with severe disabilities may only be able to express a preference for a particular activity, food or person. But to constantly make all the choices and decisions for them eliminates even the possibility for their self-actualization. In addition, by choosing to make all the choices and decisions and bearing such responsibilities, the decision-makers are choosing to limit their own roles.

Interactive Components

The three components in the Interactive Curricular Model for Life Planning--roles, environments, and basic human needs--are greatly dependent upon one another and interact vigorously with each other. Defined by his or her culture, an individual's roles shape one's activities and structure one's life. Other people expect an individual to do certain things and behave in certain ways related to each role that individual occupies, and usually the individual also holds similar expectations. But how a role, and the routines that collectively comprise that role, is actually performed is greatly influenced by the environment. For example, any plumber should be able to repair plumbing fixtures, stop leaks, unclog drains, and so forth; otherwise, he would not fit the role of a plumber. But the routines of a plumber who works for a large company housed in one building are quite different from the routines of a self-employed plumber who specializes in home plumbing.

In turn, a specific role and its specific environment usually influence the kinds and range of human needs one is able to meet and draw from the situation. For example, assembling bicycle parts in a vocational sheltered workshop and assembling bicycle parts in a factory can result not only in significant differences in the skills and routines required by the two jobs, but also in significant differences in the satisfaction derived from the two jobs. In fact, work performed in sheltered workshops is seldom comparable to work in the competitive sector (Greenleigh, 1975 in Pomerantz & Marholin, 1977). In the more restrictive role and environment of sheltered workshops, the job's routines are generally low skilled, tedious, unrewarding and unremunerative--conditions that are seldom found in the competitive sector. Hence, it is highly probable that individuals who work in sheltered workshops have fewer options for meeting a wide variety of human needs, as well as qualitative differences in the attainment of those needs (see Table 2.3 for a more detailed explanation).

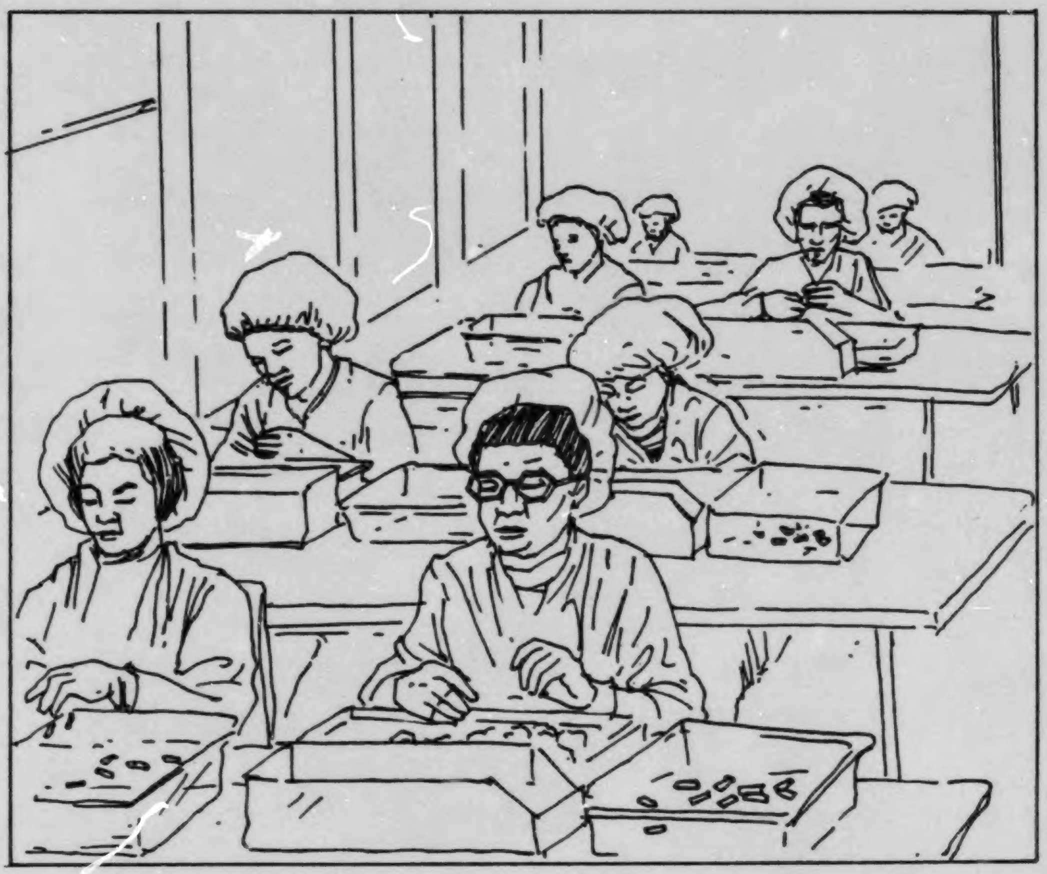


Table 2.3 | HAWAII INTEGRATION PROJECT | 1983

Comparison Between Jobs
Role: Bicycle Assembler

	Sheltered Workshop[1]	Factory (competitive sector)
Hiring Requirements:	Entrance based on traditional educational assessment (medical, academic, etc.)[2]	Has skills to perform tasks in the job
Time:	Average 30 hour work week 10-20 hours down time[3] Lunch and breaks	40 hours work week Lunch and breaks
Content:	Assemble bicycle parts[4] (skills useful in this setting only and not performed in competitive sector)	Runs machine that assembles bicycles
Consequences:	Piece work (average $.75/hour[3]); rarely paid an hourly wage Paid less than competitive employment	Minimum wage or above; union wages
Process:	Report to work Work all day or parts of a day with time off for breaks, lunch, and down time	Report to work; specific time Work entire day with time for break and lunch Leave work
Place:	Church basement, schools, etc.; places non-specific to the type of work	Bicycle factory

[1] A generalized picture of sheltered workshops

[2] Generally accept higher functioning disabled persons

[3] Greenleigh Associates, Inc., 1975 in Pomerantz & Marholin, 1977

[4] Low-skilled work, not necessarily a cost-effective work procedure and skills not applicable to competitive employment (Greenleigh Associates, 1975)

Table 2.3

HAWAII INTEGRATION PROJECT

1983

Comparison Between Jobs

Role: Bicycle Assembler

Attributes Of Role[1]	Basic Human Needs Met	Sheltered Workshop	Factory (competitive sector)
Financial support	Physiological Safety Achievement	No[2]	Yes
Opportunity to actualize parts of self	Self-actualization	No-Partial	Yes
Gain respect from others	Recognition by others Acceptance	Partial[3]	Yes
Opportunity to enhance skills and behaviors	Achievement Recognition by others	Partial[4]	Yes
Opportunity to enhance skills and behaviors of one's choice	Achievement Self-actualization	No	Yes
Personal satisfaction	Achievement Self-actualization	Yes-Partial	Yes

---

[1] Some of the consequences of work as cited in Studs Turkel, Working, Pantheon Books, 1972

[2] Wages received are minimal (e.g., spending money); financial support for disabled persons who work in sheltered workshops is primarily through Social Security Insurance

[3] Since employment in sheltered workshops is not comparable to competitive employment, recognition from others could be considered "token-like"

[4] Skills learned in sheltered workshops do not maintain their value and are not generally needed in competitive employment (Greenleigh, 1975)

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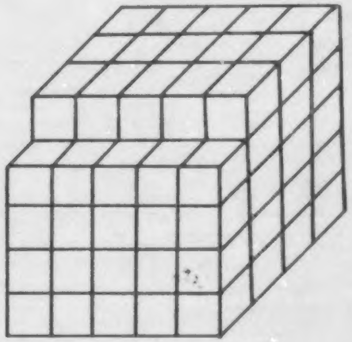
The goal of life planning, whether the person is disabled or nondisabled, is to identify the most normalized roles in the most natural environments that can meet the individual's basic human needs. As students, teachers, parents, guardians, and educational representatives explore present and future roles, the interaction of the three components becomes critical to making decisions about these roles. It is not necessary to formulate a specific role for each of the 100 possible combinations of roles, environments, and needs (e.g., friend role in an educational environment which meets a physiological need, friend role in an educational environment which meets a safety need, friend role in a vocational environment which meets an acceptance and friendship need, etc.). At the very least, however, the life-planners should become aware of and investigate the roles that one can assume in one or more environments which can meet many of that person's needs. (See Figure 2.4 on page 37.)

The interactive nature of the components should also caution these life-planners about limiting their concerns to only one part of the model, such as the self-maintenance role (toileting, eating, etc.) in a domestic environment. There is little justification for staying within one role in one environment and delaying teaching the routines and activities needed for other roles and environments until a severely disabled individual acquires a specified level of competence in the self-maintenance role. For if it is difficult for that individual to reach that level of competency and his or her training is thereby limited to only a few routines, then he or she is also being limited in the roles, environments, and human needs he or she can fulfill.

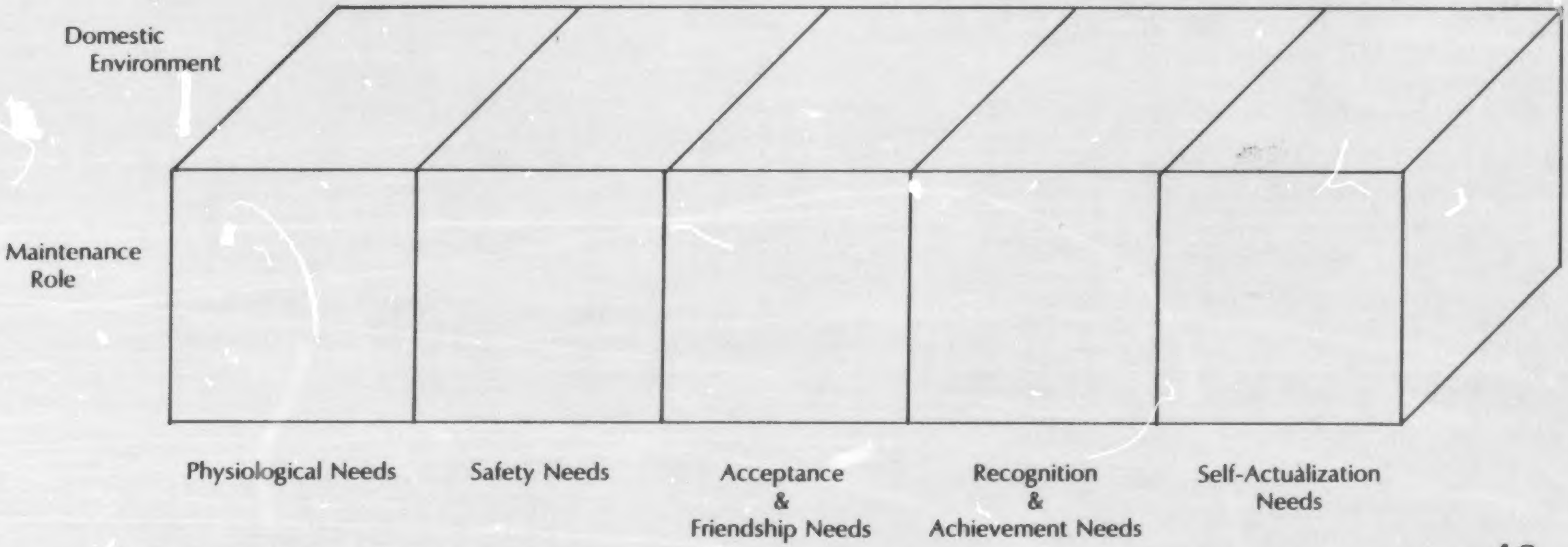
Figure 2.4

HAWAII INTEGRATION PROJECT

Section of Interactive Curricular Model for Life Planning



Hemphill, Noonan, and Levy; 1983


Domestic Environment
Maintenance Role
Physiological Needs
Safety Needs
Acceptance & Friendship Needs
Recognition & Achievement Needs
Self-Actualization Needs

Routines and Skills

Defined by the interactions among a role, an environment, and the human needs to be met are routines, activities, and skills. (See Figure 2.5 on page 39.) A routine is a sequence of activities requiring specific skills that collectively are needed to perform a role. For example, in order to be a carpenter's assistant on house framing jobs in Hill City, U.S.A., and thereby taking care of one's needs for safety, recognition, and self-satisfaction, one must have the skills needed for specific routines and activities (e.g., the getting-to-the-job routine involves traveling to the bus stop, riding the bus and getting off the bus at the working place).

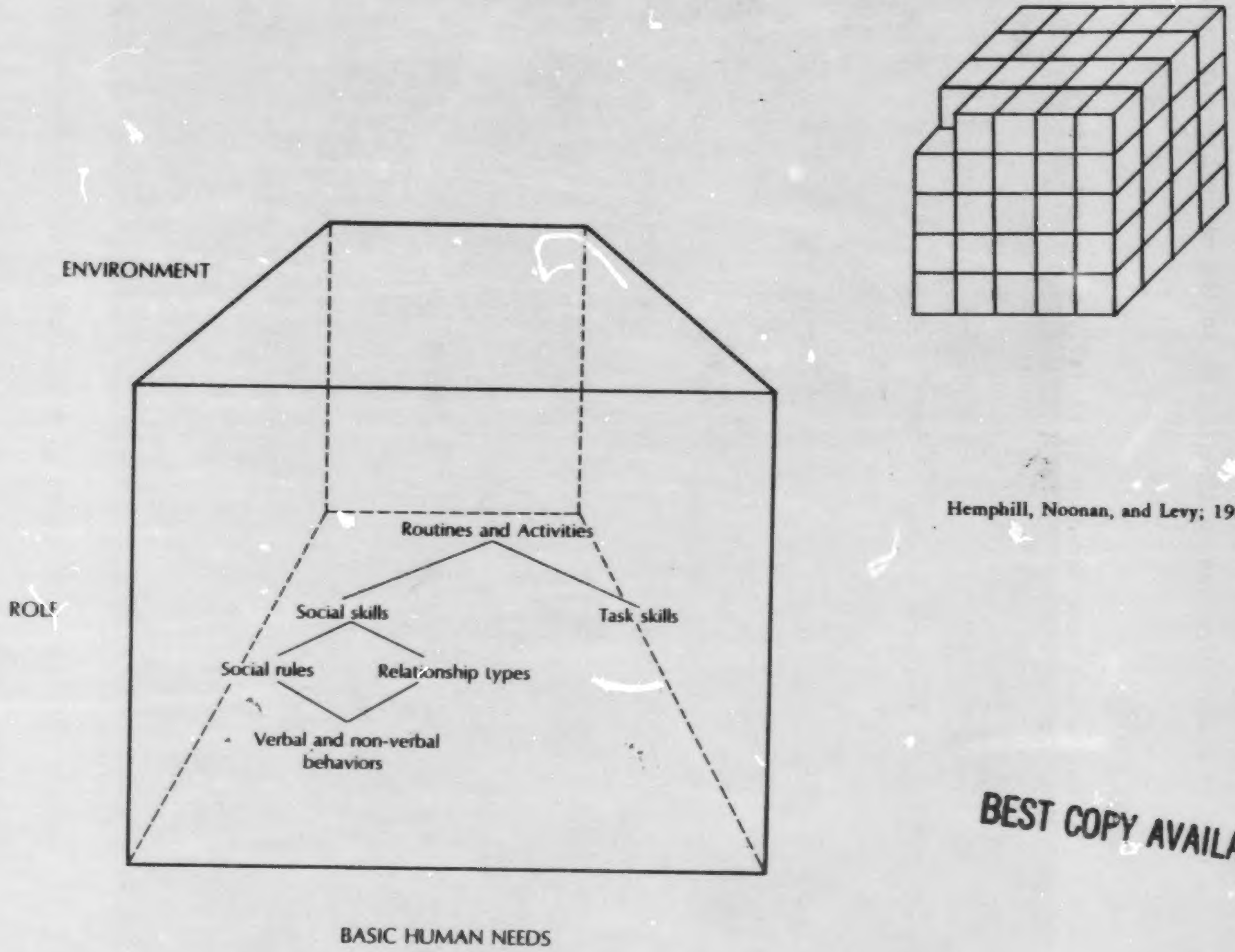
The skills required in routines and activities can be divided into social-related skills and task-related skills. There are social skills and task skills inherent to the successful performance of every routine and activity within a role. Further, these social and task skills are so intertwined with one another that it is often difficult to separate them. For example, when one goes to the movies, one needs the task-related motor skills to move forward in the ticket line, the expressive communication skills to ask for a ticket, and the counting skills to buy the ticket. But how one waits in the line with the other people, the tone of voice one uses to address the ticket seller, these are the social skills of the routine.

Task skills, the physical, cognitive, and affective skills needed to perform a specific routine or activity, are not emphasized in this curricular strategy, not because they are unimportant, but because we have chosen to focus on the social skills. However, the teacher using

Figure 2.5

HAWAII INTEGRATION PROJECT

Interactive Components of Curricular Model


ENVIRONMENT
Routines and Activities
Social skills
Task skills
Social rules
Relationship types
Verbal and non-verbal behaviors
ROLE
BASIC HUMAN NEEDS

Hemphill, Noonan, and Levy; 1983

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this strategy should always keep in mind the task skills and should teach both the task and social skills of a routine concurrently because that is usually how the routine occurs in the natural environment.

Social Skills

People are considered to be socially competent within a role and environment when they are able to display the appropriate verbal and nonverbal social responses. How an individual determines the "correct" or "acceptable" way to respond in one's role and environment depends upon the social rules and the relationship features that are specific to the situation. Within any given culture, there are social rules and expectations that regulate and guide how one should eat, sleep, greet others, and the countless routines and activities that fill people's lives. These rules usually vary according to genders, ages, ranks, ethnic groups, religions, etc. of the persons coming to an interaction.

The social skills needed for a particular situation also depend upon the features inherent in the relationship(s) of the persons engaged in the interaction. The three relationship features in Table 2.6--number of individuals in the relationship, type of relationship, and nature of relationship--describe almost all kinds of relationships across various roles and environments. For example, the routine of going to work on the bus has the generalized relationship features of being with many people who are strangers in a reciprocal-oriented interaction. In these relationships, an individual is expected to behave with reserved friendliness towards strangers, sit quietly, and quickly exit the bus with a minimum of disruption.

An individual's role, enviroments, and needs, as well as the social rules and relationship features of the interactions he or she

Table 2.6 HAWAII INTEGRATION PROJECT 1983

Relationship Features

Number of Individuals in Relationship:

- Alone
- One-to-One
- Small Group
- Large Group

Type of Relationship:

Stranger*:	Unfamiliar person, person who is not an acquaintance (other shoppers at a grocery store, other spectators at a football game)
Nonpersonal Significant*:	Unacquainted person who occupies a role which offers information or services to others; or person encountered frequently as a result of the person's role (public librarian, cashier at bank, fellow church members)
Personal Significant*:	An acquaintance or person known well to the individual (brother, sister, best friend)

Nature of Relationship:

Directed:	An interaction in which the individual is directed by someone or the flow of interaction is controlled by another person (the helpee in a helper-helpee relationship, the worker in a supervisor-worker relationship)
Reciprocal:	An interaction in which there is reciprocity between/among all individuals (playing with a friend, attending a church supper)
Directive:	An interaction in which the individual is directing someone else or controlling the flow of the interaction (teacher giving a lecture, team captain of a baseball team)

*Terms found in Voeltz & Kishi (1982)

engages in throughout his or her life are more complex, subtle, and changeable than any manual can describe. And if one is to be considered socially competent, then one must have a wide repertoire of such social skills that one can express through verbal and/or non-verbal behaviors. In addition, one must also know when it is appropriate and inappropriate to display these skills. For example, when one initially greets individuals at work or school at the day's start, a "hello" and "how are you" greeting is appropriate. However, most often these greetings are not repeated throughout the day whenever one encounters his or her coworkers again. Likewise, a person in this situation would greet a coworker with a "hello" and "how are you," while he or she probably would not greet a stranger in the same way. Again, as with all the examples given in this manual, the real-life situations, the factors which cue one's appropriate responses, as well as the appropriate responses themselves, are quite complex.

Aware of these difficulties, we have nevertheless settled upon a core of ten social skills that we think can be helpful in providing an individual with a full range of social responses for any given situation. These ten social skills are described in Table 2.7 on page 43 and serve as the basis for this manual's assessment, instruction, and evaluation of social skills for students with severe disabilities. These social skills follow the sequence of all interactions: (a) the beginning, starting or gaining entry into the interaction; (b) the middle, maintaining the interaction using one or more skills such as initiates question, responds to question, chooses among materials, imitates model, follows directions, follows activity's rules, accepts assistance, offers assistance, and demonstrates skills of routine; and (c) the ending, closing or taking leave of the interaction.

Table 2.7 HAWAII INTEGRATION PROJECT 1983

Important Social Skills

Entry:

- Gains entry/Greetings
  - Begins or joins social interaction, situation, or routine/activity

Maintenance:

- Initiates question/statement/preference
  - Asks, requests, comments, or expresses a want/desire regarding present situation or another situation
- Responds to question/statement
  - Communicates or behaves in answer to a question; comments on a statement
- Chooses among materials, activities, etc., presented
  - Makes selection when given two or more alternatives/options
- Imitates model
  - Copies verbal or non-verbal behavior of another individual
- Follows directions
  - Behaves verbally or non-verbally as requested by another individual
- Follows activity's rules
  - Adheres to minimal rules of the activity (e.g., attending to the activity, sharing, passing or not passing the ball)
- Accepts assistance
  - Allows another individual to help with the activity or routine
- Requests/offers assistance
  - Indicates need for help when situation requires help; gives help when an individual needs help

Exit:

- Takes exit/Farewells
  - Terminates or leaves the interaction, situation, or routine/activity.

Chapter III

The Social Skills Assessment Procedure

If the teacher would like to incorporate the assumptions and model explained in the two previous chapters into a particular student's curriculum, then the process would naturally begin with an assessment of the student. This assessment procedure consists of five steps:

1. listing the current and subsequent desired roles and environments for the student, including the corresponding routines and activities;
2. observing and listing the student's present routines and activities;
3. conducting a discrepancy analysis between what is desired and what is occurring;
4. selecting and prioritizing the critical routines and activities to and for the student; and
5. examining the social skills embedded in these critical routines and activities to identify appropriate objectives for instruction.

After completing these steps, the teacher should have the specific data needed to write instructional objectives for important social skills that are tailored to the student's individual needs and are interwoven with the student's other current and future objectives.

Step 1: Listing Desired Roles and Environments

In the first step, as in formulating the student's Individual Educational Plan (IEP), the teacher must confer with the student's parent(s) and/or other caregivers about the student's strengths, deficits, and needs. Not only should the needs and expectations of these caregivers be considered in this discussion, but the needs and expectations of any siblings, friends, etc., with whom the student spends time should also be considered. Traditionally, discussions about IEPs have quickly narrowed to the task of formulating specific and discrete instructional objectives such as, "Given a spoon and the verbal command to grasp it, the student shall grasp the spoon during two out of three daily eating periods for at least two weeks." In the implementation of this curriculum, the teacher may indeed be teaching the student to grasp a spoon, but at this step in the assessment process such "tunnel vision" is discouraged. Too often when the objectives are limited too early in the process, the teacher comes to believe that a specific skill is the only skill the student needs to learn, the most important skill the student needs to learn, etc.

Step 1 of the assessment process encourages the teacher and parent to take a more generalized and functional approach in formulating educational objectives so that there will be a greater range of options considered for instruction. The decision-makers should continually refer to and keep in mind the broad scope of the Interactive Curricular Model for Life Planning (see Figure 2.1). Rather than asking the parent, "What skills do you want your child to have?", the teacher should start with, "What roles do you want your child to have?" The teacher may want to point out the roles that the severely handicapped person has been born into, like being a son or a brother, the roles that the person is already engaging in, like a person who can partially maintain his bodily functions, and the roles that the person may grow into, like being a paid worker. And while the more specific role of a worker in competitive employment may be difficult for the person ever to attain, a worker role might still be possible with appropriate training and modifications. Therefore, none of the general role categories shown in the model should be dismissed at this time. In addition, if there are any roles valued by the decision-makers that are not in the model, these roles should also be considered.

After the teacher and parent have explored the range of roles possible for the individual child and have selected some of the more desirable roles which have empirical and social validity, the routines and activities that correspond to each role in an environment must be listed (see Form 3.1, Current and Subsequent Desired Roles and Environments, on page 48 for an example). This task should be approached systematically by looking at all twenty combinations of roles and environments. For example, the first question to ask might be, "What is the student's desired leisure/recreational role in the educational environment for this school year?" An answer might be that the student will have the leisure role of a participant utilizing playground equipment during recess. A question about a future leisure/recreational role for the student might yield an answer that the student will take on the role of a participant in group games during recess in the educational environment. The next question could either combine the leisure/recreational role with the vocational environment, or the family/friend role could be explored in relation to the educational environment. For example, a desired family/friend role in the present and future educational environment might be that the student will be a friend to another student in the classroom.

After all such desired present and future roles have been listed for

Form 3.1

HAWAII INTEGRATION PROJECT

Current and Subsequent Desired Roles and Environments

Date: 8/30/83

Student: C.

Rater: NJH

	Role	Environment	Routines and Activities
Present	Friend with classmate or student from another class	Educational	Travelling together to and from community training sites; interacting during classroom freetime; eating together in cafeteria, interacting in hallway
Future	Friend with student from another class.	Educational	Playing together during recess on the playground
Present	Not applicable		
Future	Friend with at least one individual at work	Vocational	Interacting with friends before work, on work breaks, and after work. Eating lunch together
Present	Sibling and family member	Domestic	Playing with sibling, sharing belongings or treats with sibling; Interacting with family, participating in family social gatherings, attending church with family.
Future	Family member	Domestic	Engaging in hobby independently, Operating T.V., radio/stereo independently
Present	Movie-goer	Community	Behaving in children's group; engaging in group activities
Future	Movie-goer	Community	Follows routine for purchasing ticket and obtaining seat

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each environment, the routines and activities that correspond to each of them must then be listed. Corresponding routines and activities would be those activities that are necessary for the particular role and environment, or routines and activities that would benefit the student, be useful to the student or simply be appropriate for the student in the role and environment. To continue with the last family/friend role example, corresponding routines and activities for the desired role of being friends with a classroom peer might include traveling to and from community training sites with the classroom peer, interacting with the classroom peer during the occasional free time periods, and working cooperatively with the peer during instruction in simple food preparation. The future desired role in the educational environment might then add playing together during recess on the school playground to these other routines and activities. A completed example of a listing of present and future desired family/friend roles across environments, and the corresponding routines and activities, are presented on page 48. Although all areas might not be judged to be important at the present time, all areas should at least be considered by both parent(s) and teacher. The decision to skip over an area for the time being should be decided jointly and provisions for periodic reviews of all decisions should be made.

Step 2: Listing Present Routines and Activities

Once the teacher and parent have decided on the more desired roles and the routines and activities that are part of that role, the second step is to observe and record the student's present routines and activities. A suggested method to record the necessary data is Form 3.2, Inventory of Present Routines and Activities, on page 51. This inventory may be filled out by either the teacher or parent, or both. On this form, the observer fills in the day, date, and time of the observation. In the third column, the general environment (e.g., domestic, educational, vocational, or community) should be noted, as well as the specific setting (e.g., bedroom, kitchen, classroom). In the fourth column, the observer describes the role or roles the person is assuming at that time (e.g., person who maintains his possessions, family member). And in the fifth column, the observer simply watches the child and writes down the routines and activities in which he or she is involved and which help to define the specified role. The inventory on page 51 has been completed for a morning of a weekend day. It is suggested that such an inventory be filled out for one or two weekdays, and both a Saturday and a Sunday.

Conducting the Inventory of Present Routines and Activities in Step 2 may reveal some critical routines/activities that were overlooked by the parent(s) and the teacher in Step 1. The completed inventory should be reviewed, therefore, and any additional desirable routines and activities should be added to the list developed in Step 1. For although this inventory only focuses current routines and activities, related desirable ones that would be important to the child in subsequent situations should also be noted.

Form 3.2

HAWAII INTEGRATION PROJECT

Inventory of Present Routines and Activities

Date: 8/ /83

Student: C.

Rater: NJH

Day Date	Approximate Time Period	Environment Setting	Role	Routines and Activities
Saturday 8/27/83	8^{30}-9^{15} a.m.	Domestic - Bedroom - Bathroom - Bedroom	Maintenance	Morning wake up - Toileting - Showering - Dressing
	9^{15}-9^{45} a.m.	Domestic - Kitchen	Maintenance	Eating - Selecting breakfast food - Getting dishes, utensils - Eating - Clearing table
	9^{45}-9^{55} a.m.	Domestic/ Vocational - Bathroom - Bedroom	Maintenance	Preparing to leave the house - Toileting - Putting on jacket
	9^{55}-11^{30} a.m.	Community - Neighborhood grocery store	Family/friends & Maintenance	Accompanying parent in grocery shopping - Locating items on shelf - Using grocery cart
	11^{30}-1^{30} pm	Domestic - Family room	Leisure/Recreational Family/friends	Using free time - Cooperative play with sibling - Independent play

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Step 3: Conducting a Discrepancy Analysis

There are two parts to the discrepancy analysis of the desired routines and activities generated in Step 1 and the inventory of routines and activities recorded in Step 2. In the first part of the analysis, the teacher and parent should closely examine the routines and activities to identify those that are similar or identical. Routines and activities listed on the Inventory of Present Routines and Activities (Step 2) are circled if they also appear on the desired roles and environments list (Step 1). The circled routines/activities on the inventory are usually those that parent(s) and/or teacher view as desirable and that the student is also presently engaged in.

The second part of the discrepancy analysis is to note those routines/activities that are discrepant (i.e., a routine that appears on the desired roles and environments list but does not appear on the Inventory of Present Routines and Activities, or a routine that does not appear on the desired list but does appear on the inventory). The fact that the routines/activities do not appear on both sheets provides a different kind of information relating to the importance of these routines/activities; such discrepant items may be evaluated as being especially important because: (1) they are engaged in on a consistent or frequent basis, as might be seen on the inventory, or (2) they are routines/activities that are viewed by the parent/teacher as desirable even though the student does not presently participate in them. Noting similarities and discrepancies does not pinpoint priority routines/activities, but instead, provides information to aid in judging the importance of a routine/activity for prioritizing the routines/activities in the next step.

Step 4: Prioritize Routines and Activities

After conducting the discrepancy analysis, the teacher and parent probably have a very long list of what they think the child needs to learn --probably far too many routines and activities to address as instructional objectives during one school year. Step 4, then, is a procedure for prioritizing and selecting the routines and activities from which relevant social skills will later be derived. Form 3.3 is a Priorities Worksheet that can be used to determine the priorities among those routines/activities

Form 3.3

HAWAII INTEGRATION PROJECT

Priorities Worksheet

Date: 9/22/83

Student: C

Rater: MJN

Part I

a) Select three to five of the most important routines or activities that relate to each specific heading, and rank them in order of importance. If a routine or activity is important to more than one criterion heading, it should be listed under all the relevant headings.

Of Greatest Importance to Parents	Meets Wide Range of Human Needs	Most Likely to Contribute to LRE or Integration	Occurs/Needed in Multiple Environments/Routines
1. toileting	1. interacts with family/friends	1. toileting	1. toileting
2 independent play	2. selecting clothing	2 dressing	2 interacts with family/friends
3 putting on jacket	3. engages in group activities	3. engages in group activities	3. eating
4 interacts with family	4. Cooperative play with sibling	4 participates with family/social gatherings	4. cooperative play/work
5. participates with family social gatherings	5. chooses and engages in hobby	5. interacts with family/friends	5. independent play/work

Part II

a) Circle those routines or activities that appear in more than one column.

b) Based on rank order and repetition, rank all the circled items on one master list.

PRIORITIES

1. toileting
2. interacts with family/friends
3. independent play
4. engages in group activities
5. cooperative play/work
6. participates with family/social gatherings

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listed thus far. The headings of the four columns on the worksheet represent functional criteria for selecting the most important routines/ activities. If the teacher or parent feel that these headings should be modified in any way, they should do so before the process of prioritizing and eliminating begins. However, the headings on the form given are based on the assumptions discussed in the previous chapters and any radical deviations from them will undermine this curricular strategy's goals.

Once the teacher and parent are satisfied with the column headings (criteria for prioritizing) they should select three to five of the most important routines or activities from the desired routines/activities list (Step 1) and the Social Skills Inventory (Step 2) that relate to each specific heading. These selected routines and activities should be ranked in the order of importance, with #1 being the most important. If a routine or activity is important to more than one criterion heading, it can and should be listed in as many columns as are relevant. Such repeated rankings will help to identify those routines and activities that are the most critical to the child.

Of greatest importance to the parents. Because the parents live daily with the disabled student and because their concerns for the student are longitudinal, input from the parents should weigh heavily in prioritizing what the child will be taught. Routines/activities listed here would primarily relate to the student's everyday needs for living and participating with other individuals in the home, goals for the future, or routines/activities that will decrease the dependency of the disabled student. In the example on page 54, the parent ranked the self-help skills of toileting and putting on a jacket as first and third, and also ranked independent play as being very important. These are activities that would obviously result in decreasing the constant demands of a very dependent disabled child. More social activities, communicating with the family and participating in family gatherings, were also ranked as very important; these activities would probably result in a more normalized life style for the entire family.

Meets a wide range of human needs. This criterion reiterates the third dimension of the Interactive Curricular Model. As emphasized earlier in Chapter II, the human needs should not be viewed as a hierarchy but rather as a range of needs to be met for everyone. Everyone should have opportunities to obtain acceptance, friendship, recognition, achievement, and fulfillment of potential--even if that individual cannot fully meet his or her more basic needs (e.g., physiological and safety needs).

In considering basic human needs, therefore, the parent and teacher should consider the full range of needs and avoid emphasizing any one or two needs. Routines and activities that address more than one need should probably be given special consideration in deciding the rank order. For example, the first activitity listed on page 54, communicates with family, is an example of an activity that can meet multiple human needs: it enables the child to ask for assistance and thereby meet physiological and safety needs, it may increase the acceptance of the child by others, it may increase the child's opportunities for forming friendships, and it may be a source for recognition and achievement.

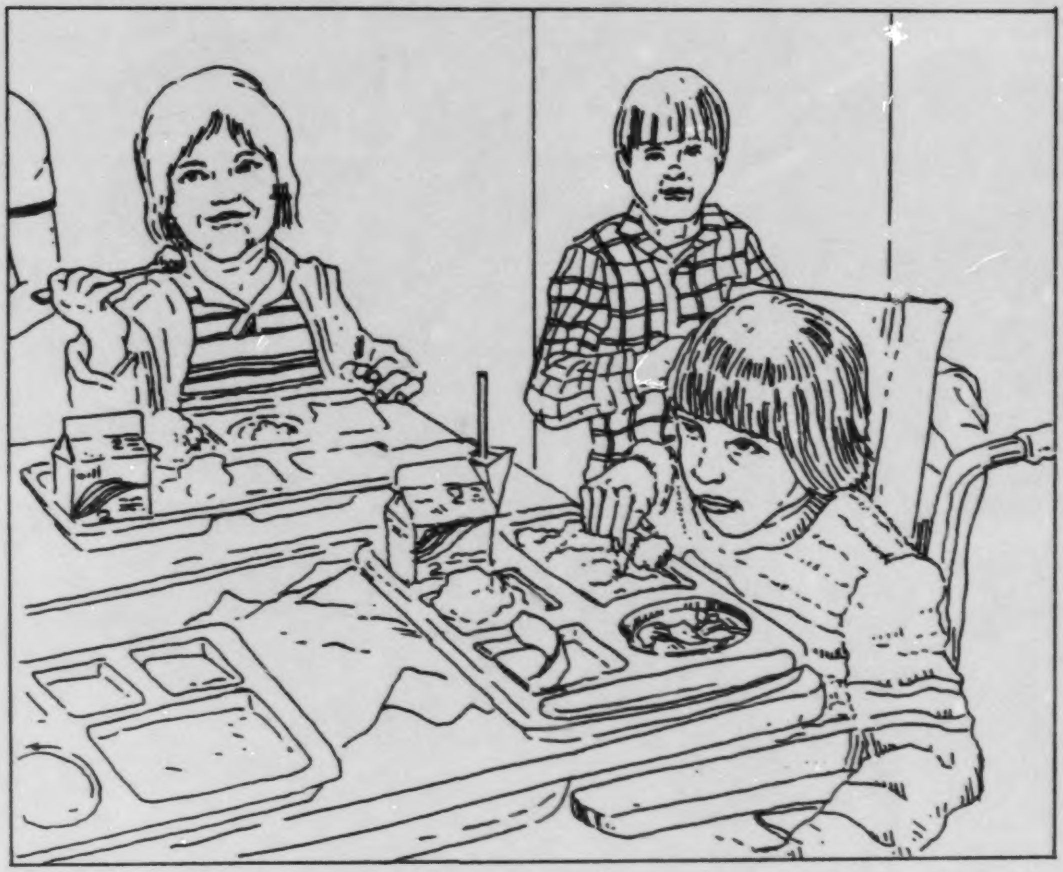
Most likely to contribute to LRE or integration. Routines and activities related to a less restrictive or more integrated environment are clearly a major goal of all special education programs and are consistent with the intent of P.L. 94-142 and the values of normalization. The types of routines and activities that are most likely to be included under this column are ones related to personal self-care, interaction with others, and independent performance. In the example on the Priorities Worksheet, the teacher and parent ranked the self-care activities of toileting and dressing as first and second. The other three activities ranked as priorities in this column are social and communication skills: engages in group activities, participates with family social gatherings, and communicates with family members. All of these activities will increase the probability of the child being competent in integrated community settings and will contribute to the independence of the child.

Occurs/needed in multiple environments/routines. The routines and activities listed in this column are ones that occur and/or are needed in more than one situation across environments and/or routines, and thus increase the likelihood of the child's participation in valued roles. These routines and activities will primarily include general activities that occur quite often in a child's daily life. For example, no matter what environment the child is in, several times a day he or she must engage in the activity of toileting; toileting was ranked first under this column. Opportunities for the four other activities listed in the example also occur repeatedly and across multiple environments in the course of the child's day: communicating with family and friends is necessary to express wants and needs and to engage in social interactions; at least three meals are eaten daily; cooperation with others is advantageous and sometimes necessary for many types of play and work activities; and being able occupy oneself independently with work or play is continuously required in many diverse situations.

Priortizing routines/activities from rank-ordered lists. After all the columns on the Priorities Worksheet have three to five routines or activities listed under each column, the teacher and parent should circle those routines and activities that appear in more than one column. In the example on page 54, toileting appears first in three columns; its rank order and repetition indicate that it is a major priority. Toileting, therefore, is listed as the first priority on the bottom half of the worksheet. Communicating with family/friends is also ranked first in one column and circled, so it is listed as the second priority. Independent play is only ranked second, but it is also circled because it was listed more than once among the four columns (communicating with family/friends is a circled second-ranked activity, but it has already been prioritized). Independent play, then, is ranked third on the priorities list. Ranking the items listed on the top of the worksheet continues in the same manner until all of the circled items have been ranked; Form 3.3 has been completed in this manner. The final list of priorities are those routines and activities that will be assessed through behavioral observation in Step 5 to determine the specific social skill needs of the student.

Step 5: Conduct Social Skills Assessment

The final step of the assessment procedure is to conduct a behavioral assessment of each priority routine/activity to determine the student's precise social skill deficits that are associated with the routines/activities listed on the previous worksheet. The instructions for such an assessment are presented with Form 3.4, Social Skills Assessment. To identify the social skills needed by the student, the teacher must observe each routine/activity identified as a priority and record the behavioral responses of the student related to social skill needs. After behavioral observation data have been recorded, the teacher subjectively evaluates the student's performance and notes whether the responses were appropriate or adequate. Additional behaviors that would have been appropriate or useful to the situation are also noted. Following the behavioral observation and its evaluation, four questions must be answered in regards to the nature of the routine/activity that was observed. The answers to these questions help in determining the appropriateness of the behaviors observed and listed in the post-hoc evaluation of the observation. The assessment may be conducted more than once if the teacher is not certain that the responses observed represent "typical" behavior by the student. As indicated in the instructions, the completion of the Social Skill Assessment will yield the social skill objectives for which intervention programs can be designed. Such programs are discussed in the following chapter.



Form 3.4

HAWAII INTEGRATION PROJECT
Social Skills Assessment

Date: 9/20/83

Student: C # Peers Present: 3 # Adults: 1 Rater: mgh
Setting: school bathroom Routine/Activity: toileting Time Period: 9¹⁰am - 9³⁰a.m.

PART I

a) In the Observation column below, code the student's social interaction behaviors in the context of the identified setting and routine/activity.

b) In the Post-Observation column, write comments about behaviors that were not observed (or not observed at an appropriate frequency) but would be useful and/or adaptive to the setting and routine/activity. If behaviors were socially inappropriate, note the reason(s).

BEHAVIOR CODE
v: vocalization or verbalization
s: formal sign language
g: gesture/facial expression/non-verbal communication
e: social eye contact
...: preceding coded behavior occurred repeatedly
--: preceding coded behavior was socially inappropriate

SOCIAL SKILL	OBSERVATION	POST-OBSERVATION
Gains entry/greetings	e- e-	should greet familiar person
Initiates question/statement/preference		NA
Responds to question/statement	g – e- g	no response to question
Chooses among materials, activities, etc. presented		NA
Imitates model		NA
Follows directions	g-e- g-e-	instructions were repeated with physical assistance
Follows activity's rules	g-	must recognize indications of vacancy
Accepts assistance	v, g, v, g	O.K.
Requests/offers assistance	g–	should request help w/ soap dispenser
Takes exit/farewells		NA

PART II

	CIRCLE ONE.		
1. Was the social nature of the routine/activity passive or active?	[✓ passive]		active
2. Rate the student's level of social participation in the activity?	[✓ low]	medium	high
3. Was the student's social behavior "typical" of him/her?	[✓ yes]		no
4. Did the student demonstrate the necessary task-related skills (motor, cognitive, affective) to engage in the activity?	yes	[✓ partially]	no

PART III

Summary - major social skill needs of routine/activity:

1. greet familiar peers encountered in the bathroom
2 goes to toilet without assistance (i.e., walks directly to stall and locates vacant one and enters)
3 recognizes vacant stall
4. verbally requests assistance with soap dispenser

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Form 3.4

HAWAII INTEGRATION PROJECT

Social Skills Assessment

Date: 9/20/83

Student: C.   # Peers Present: 1   # Adults: 1   Rater: MAH

Setting: livingroom (home)   Routine/Activity: interacts w/ family (arrival from school)   Time Period: 4^{15} - 4^{30} pm

PART I

a) In the Observation column below, code the student's social interaction behaviors in the context of the identified setting and routine/activity.

b) In the Post-Observation column, write comments about behaviors that were not observed (or not observed at an appropriate frequency) but would be useful and/or adaptive to the setting and routine/activity. If behaviors were socially inappropriate, note the reason(s).

BEHAVIOR CODE

v: vocalization or verbalization
s: formal sign language
g: gesture/facial expression/non-verbal communication
e: social eye contact
...: preceding coded behavior occurred repeatedly
--: preceding coded behavior was socially inappropriate

SOCIAL SKILL	OBSERVATION	POST-OBSERVATION
Gains entry/greetings	e- e- e-	should greet familiar person
Initiates question/statement/preference		NA
Responds to question/statement	e-e-e-e-e-	should attend to speaker & respond
Chooses among materials, activities, etc. presented	g-	must scan options & make choice
Imitates model		NA
Follows directions	g- e- g- e-	should attend to speaker & respond
Follows activity's rules	e- e-	should attend to speaker should share object
Accepts assistance	g g- gg	usually accepts assistance passively
Requests/offers assistance		NA
Takes exit/farewells		NA

PART II

CIRCLE ONE

1. Was the social nature of the routine/activity passive or active? passive [✓ active]
2. Rate the student's level of social participation in the activity? [✓ low] medium high
3. Was the student's social behavior "typical" of him/her? [✓ yes] no
4. Did the student demonstrate the necessary task-related skills (motor, cognitive, affective) to engage in the activity? yes [✓ partially] no

PART III

Summary - major social skill needs of routine/activity:

1. greet sibling & parent upon arrival from school
2. attend to parent and sibling when spoken to
3 indicate choice of leisure activity with sibling

Instructions for Social Skills Assessment

1. Complete the blanks at the top of the assessment form.

   * # Peers Present and # Adults Present indicates the number of other students (disabled and/or nondisabled) and/or adults who are present in the interaction situation. Students or adults who are present in the general vicinity but are not involved in the interactional situation should not be included in these two counts.

   * Setting refers to the location(s) in which the student will be observed (e.g., cafeteria, bathroom, street corner, on a bus, etc.).

   * Routine/Activity identifies the action or the series of actions that will be observed (e.g., getting ready for lunch, locating an item in the grocery store, etc.).

   * Time Period indicates the time at which the observation begins and ends.

2. Part I(a)

   Observe the student's social skills in the setting and at the routine/activity specified at the top of the assessment form. The person conducting the assessment should become familiar with the definitions of the social skills and behavior codes to be used in the assessment prior to the observation.

   The social skills in the first column of the assessment form are defined as follows:

   * Gains entry/Greetings
     Begins or joins social interaction, situation, or routine/activity.

   * Initiates question/statement/preference
     Asks, requests, comments, or expresses a want/desire regarding present situation or another situation.

   * Responds to question/statement
     Communicates or behaves in answer to a question; comments on a statement.

   * Chooses among materials, activities, etc., presented
     Makes selection when given two or more alternatives/options.

   * Imitates model
     Copies verbal or non-verbal behavior of another individual

- Follows directions
  Behaves verbally or non-verbally as requested by another individual.

- Follows activity's rules
  Adheres to minimal rules of the activity (e.g., attending to the activity, sharing, passing or not passing the ball).

- Accepts assistance
  Allows another individual to help with the activity or routine.

- Requests/offers assistance
  Indicates need for help when situation requires help; gives help when an individual(s) needs help.

- Takes exit/Farewells
  Terminates or leaves the social interaction, situation, or routine/activity.

Social skills observed during the assessment are recorded using the code in the box at the upper right portion of the assessment form.

The code is defined as follows:

*	v	vocalization or verbalization Any sound(s) or word(s) produced vocally and functions communicatively.
*	s	formal sign language or communication board symbol A sign or modified/adapted sign that is part of a comprehensive sign system; a picture, drawing, or symbol on a communication board.
*	g	gesture, facial expression, non-verbal communication Any informal non-verbal communication (except for eye-contact)
*	e	social eye/contact Eye/contact that is in response to our functions to communicate.
*	...	preceding coded behavior occurred repeatedly Follows another code (e.g., v..., s..., g..., or e...) to indicate observations of the same behavior occurring successively.
*	--	preceding coded behavior was socially inappropriate Follows another code to indicate inappropriate behavior. For example, screaming or crying would be coded as v--, throwing materials or pinching would be coded as g--, etc.

3. Part I (b)

After the routine/activity has been observed and the student's social skills have been coded, review the assessment data recorded in the

69

Observation column. Write comments in the Post-Observation column on the adequacy and appropriateness of social skills demonstrated or not demonstrated by the student. It would be useful to note if the opportunity to demonstrate the skill was available or if the skill was appropriate to the routine/activity. Indicate skill needs or skills that would be beneficial to the social aspect of the routine/activity, including appropriateness of responses to relationship features, in the Post-Observation column.

4. Part II

Circle one answer for each of the four questions in order to gain more information about relationship between the student and the routine/activity.

5. Part III

Review the Observation and Post-Observation columns in Part I, and the responses to Part II. After considering both parts of the assessment, list the social skill needs related to the routine/activity that has just been observed.

Chapter IV

Social Skills Instruction

After the student's social skills have been assessed and the important social skills targeted for instruction, the teacher can then develop instructional programs suitable for that student. Instructional program development has been fairly well described in many articles and texts on the education of severely disabled students. This chapter will, therefore, only attempt to integrate established guidelines for program development, new trends in developing programs, and programmatic concerns related specifically to teaching social skills. As in the other chapters, we urge the teacher to always relate the particular social skill being taught and the instructional methods being used to the present and future roles, environments, and needs of that student. The day-to-day activities in the classroom should always be evaluated for their educational validity, with the teacher constantly asking questions such as, "When and where outside this classroom will the student be able to use this skill?", "What role is this activity enabling the student to fulfill?", "How important is this to the student?", and "Why am I doing this?"

Instructional Objectives

Instructional objectives are usually written as behavioral objectives, requiring that a response be operationally defined to include: a) precisely what the behavior is, b) when the behavior should occur, and c) the criterion level at which the behavior must be performed. Traditionally, behavioral objectives were formulated haphazardly; little attention was given to assure that the behavior was based on functional requirements. The result was behavioral objectives specified to occur in single contrived situations, as responses to unnatural instructional cues, and to be demonstrated at arbitrary criterion levels. For example, it was not uncommon to see an instructional objective such as, "John will look at the teacher for five seconds when the teacher says, 'John, look,' 80% of the time for three consecutive training sessions."

In the HIP Social Skills Curricular Strategy, each component of the behavioral objective is based on functional considerations. The objective must be a response class generalizable across the range of natural situations in which the skill is needed, and at a criterion level that results in the skill being useful. The functional counterpart to "John, look," might be an objective as follows: "John will look, smile, or wave to greet a familiar person when first encountering that person each day. Eye contact will be maintained while the familiar person speaks to John."

Such functional behavioral objectives should be written for the skill needs listed on the bottom of the HIP Social Skills Assessment discussed in the previous chapter. For the toileting example on page 61, the behavioral objective could be: "Joan will find a vacant bathroom by either knocking on the door, noticing a person's feet under the door if there are several stall doors, or gently trying to open a door to see if it is locked. This skill should be demonstrated at home, in the school bathroom, and in a one-stall and multi-stall restaurant bathroom." Again, it must be emphasized that the objective should not be written solely for the routine or activity from which it was derived. Rather, the objective should be written broadly so that variations of the response that would also be acceptable are included in the operationalization of the response (i.e., define a response class), and in the delineation of a range of appropriate situations (i.e., train for stimulus generalization).

Curriculum Sequencing

Once the teacher determines what must be taught in the instructional objectives, he or she must then determine where and when the skills will be taught. Instruction should occur primarily in the context of daily routines and skill sequences, rather than in artificial massed-trial training situations. The Individualized Curriculum Sequence (ICS) is a useful curriculum model for arranging objectives in logical clusters or skill sequences as they might occur in the natural environment (Guess et al., 1978; Holvoet et al., 1980). Curriculum sequencing, as in the ICS, is recommended because skills are rarely performed in isolation from other skills. In addition, generalization of skills is more easily learned if the natural or functional relationships between skills is taught (Holvoet et al., 1980).

The instructional objectives for a student's social skills can be infused into the student's individualized program plan using the ICS model in two ways: a) the social skills objectives may be "mapped" onto the student's existing activities and routines, and/or b) new skill clusters or skill sequences, including the social skills objectives, may be developed for all of the student's IEP objectives. ICS matrices, described by Mulligan and Guess (in press), can be used to help the teacher identify the relationships among the social skills objectives and other objectives and where and when to teach the logical skill sequences derived from these objectives.

Table 4.1 is a matrix for mapping new social skills objectives onto the ongoing routines and activities at school and home. (The examples concerning toileting and interacting with family/peers were formulated in the preceding chapter.) The social skill objectives are listed across the top of the table, and the routines and activities are listed down the left side of the table. The matrix is then filled in by indicating the relationship between each social skill and each routine/activity. In instances where the social skill does not seem relevant to the routine/activity, an "X" is placed in the pertinent cell of the matrix. A social skills ICS for the hygiene routine row may be formulated as follows: a) student attends to teacher when teacher asks if student needs to use the bathroom, b) student recognizes vacant toilet, and c) student goes to toilet without assistance. This sequence can be added to the existing routines of the student's day at appropriate times (e.g., when the student goes to the bathroom during the morning hygiene period and at other times of the day). Or, instead of generating new social skill ICSs, social skill objectives may be inserted one or more times into the existing routines (e.g., "attends to teacher" may be incorporated into the hygiene routine by adding it to the beginning of each activity during hygiene--toileting, face washing, teeth brushing, and hair combing).

Table 4.2 is a matrix that is primarily useful for creating new skill sequences that are somewhat "generic" (i.e., not tied to specific routines or activities), and thus can be implemented across multiple routines or activities. This time all of the student's IEP objectives, including the social skills objectives, are listed across the top and down the left side of the matrix. This assists the teacher in considering

Table 4.1

HAWAII INTEGRATION PROJECT

Social Skills Objectives

1983

Routines/ Activities	Greets familiar persons	Recognizes vacant toilet	Goes to toilet w/o assistance	Verbally requests assistance	Attend to speaker when spoken to	Indicate choice
Hygiene	Greets peers	Recognizes vacant toilet	Goes to toilet without assistance	Requests assistance w/removal of tight caps	Attends to teacher	Selects personal items, prefers cologne
Street Crossing	╳	╳	╳	Requests assistance stepping up/down curbs	Attends to teacher	╳
Making Purchases	Greets familiar store clerks	╳	╳	Requests assistance with counting change	Attends to clerk at checkout	Selects items to purchase
Food Preparation	Greets home economic teacher assistants	╳	╳	Requests assistance with jar lids	Attends to teacher and teaching assistants	Selects preferred ingredients, seasonings
Lunch	Greets familiar schoolmates	Recognizes vacant toilet in restroom	Goes to vacant toilet without assistance	Requests assistance to open container	Attends to conversation at lunch table	Selects type of milk, vegtable and dessert
Gym	Greets gym teacher and new classmates	Recognizes vacant toilet in restroom	Goes to vacant toilet without assistance	Requests assistance shoe tying & clothes changing	Attends to gym teacher or peers	Selects teammates
Prevocational	Greets vocational teacher and new classmates	╳	╳	Requests assistance if task unknown	Attends to vocational teacher	Selects among three work tasks
Afternoon Leisure (home)	Greets parent and sibling	Recognizes vacant toilet at home	Goes to vacant toilet without assistance	Requests assistance changing clothes	Attends to conversation with parent or sibling	Selects leisure activity
Dinner (home)	╳	╳	╳	╳	Attends to dinner time conversation	Selects preferred foods and quantity

ICS matrix mapping social skill objectives onto ongoing routines/activities in the classroom, community and home. The social skill objectives included here are from the skill needs derived through the Social Skills Assessments of toileting and interacts with family/peers (see pages 61 and 62).

Table 4.2

HAWAII INTEGRATION PROJECT

1983

All Instructional Objectives

Social Skills Objectives

All Instructional Objectives	Greets familiar persons	Recognizes vacant toilet	Goes to toilet without assistance	Verbally requests assistance	Attends to speaker when spoken to	Indicates choice
Greets familiar persons				Greets & requests assistance	Greets & attends to response	Greets & indicates choice
Recognizes vacant toilet			Recognizes vacant toilet & goes to it	Requests assistance if not certain of vacancy	Attends to speaker when commenting on vacancy	
Goes to toilet without assistance					Attends to speaker, goes to toilet	Indicates need to toilet, goes to toilet
Verbally requests assistance					Requests assistance, attends to speaker	Indicates choice, requests assistance
Attends to speaker when spoken to						Indicates choice, attends to speaker
Indicates choice						
Identifies street crossing signs						
Washes hands and face						
Brushes hair						
Applies deodorant						
Pours liquid						
Etc.						

ICS Matrix relating social skill

Table 4.2

1983

HAWAII INTEGRATION PROJECT

All Instructional Objectives

Other IEP Objectives

Indentifies street crossing signs	Washes hands and face	Brushes hair	Applies deodorant	Pours liquid	Etc.
Identifies sign, requests confirmation		Brushes hair, requests check on back hair		Requests assistance if container too heavy/full	
Attends to speaker, identifies sign	Attends to direction, washes	Attends to direction, brushes hair	Attends to direction, applies deodorant	Attends to direction, pours	
	Chooses washcloth, washes	Chooses brush, brushes hair		Chooses drink, pours	
		Washes face & hands, brushes hair	Washes, applies deodorant		
			Brushes hair, applies deodorant		

objectives and other IEP objectives

the relationships between each IEP objective and developing skill sequences across the various domains of instruction. Whenever there is a logical connection between an objective on the left and an objective on the top, the teacher can fill in the pertinent cell and indicate the relationship between the two objectives. In instances where the two objectives do not seem to occur together naturally, an "X" is placed in the appropriate cell of the matrix. When adjacent cells, both vertically and horizontally, are filled in, those objectives are likely to be related and can be formulated into a skill sequence. For example, greeting and requesting assistance are related in the top row of the matrix; recognizing a vacant toilet is related to requesting assistance and attending to the speaker in the second row of the matrix. The generic sequence that can be derived from these three cells is: a) student greets familiar person, b) student requests assistance, and c) student attends to speaker for response. This three-skill sequence can then be included in many activities throughout the day when assistance is needed.

As indicated in the assumptions in Chapter I, instructional arrangements should include group as well as individual instruction. In addition to being a more efficient use of time, group instruction affords important opportunities for observational learning and instruction in social interaction skills (Brown et al., 1980; Brown & Holvoet, 1982). Brown et al. (1980) describe the use of the ICS in small group situations of two to five students. For group instruction, each student in the group must have an ICS. The skill sequences for a student may occur without any relationship to the skill sequences for the other students ("intrasequential"), or the sequences may overlap and include systematic interaction among the students ("intersequential").

If the teacher has drawn up the two matrices just described for each student of the group (a matrix that indicates the relationships among the student's objectives and the ongoing daily routines and activities and a matrix of generic sequences), then a group sequence can be formulated (see Table 4.3). The vertical ordering of the skills in the group ICS indicates the temporal order in which group instruction should occur; the table is essentially a script of what will occur during the class period. Student A in the group ICS is the same student who has been described in all of the examples for curriculum sequencing thus far. This group ICS includes the social skill objectives of attending to the speaker (three trials), greeting familiar persons (two trials), and requesting assistance (one trial). Additionally, the generic individual ICS sequence of greeting, requesting assistance, and attending to the speaker has been included in this group instruction period.

Table 4.3 HAWAII INTEGRATION PROJECT 1983

Group ICS - Hygiene

Student A	Student B	Student C
attends to teacher (goes to bathroom area)	pushes wheelchair to bathroom	follows directions (goes to bathroom)
greets peers		
	signs "hello" to each peer	
		waves "hi" to each peer
greets teaching assistant		
requests assistance (locating vacant stall)		
attends to teaching assistant for response		
adjusts clothing after using toilet		
	washes face and hands	
	pushes wheelchair towards classroom exit	
		washes face and hands
		follows directions (walks toward classroom exit)
washes face and hands		
attends to teacher (goes to classroom exit)		

A group ICS for the morning hygiene period. Student A's skill sequence was derived from the matrices in Tables 4.1 and 4.2.

Writing the Instructional Program

Each social skill need derived from the assessment process, formulated as a behavioral objective, and formatted for instruction within skill sequences, must now have a precise instructional program developed for it. It is assumed that special education teachers reading this manual have a basic knowledge of instructional techniques; therefore, these techniques will not be described in detail and will be discussed only as they relate to program development for social skills training. Teachers are referred to Sailor and Guess (1983) or Snell (1983) for thorough, in-depth discussions of the techniques.

The basic components of any instructional program are the a) antecedent, b) response, and c) consequence; all three components must be clearly operationalized. (A suggested format for writing such programs is shown on Form 4.4, Instructional Program.) Instructional techniques, i.e., the teaching procedures, are the major contents of both the antecedent and the consequence components. The response component is the behavioral objective; it may be the terminal objective, or it may be a short-term objective in a series of short-term objectives leading to the terminal objective. The goal of social skills instruction, regardless of the specific objective, is performance in the natural environment. It is important, then, that these components be as similar as possible to the antecedents, responses, and consequences found in the natural environment. Modification or changes in the natural environment should therefore be as minimal as possible when an instructional situation is being created.

The antecedent component. A complete description of the entire situation that precedes the response objective should be delineated in the antecedent component of the program; the location, other persons involved, materials, therapeutic positioning (if necessary), natural cues, and instructional cues should each be specified. Operationalizing these elements does not mean that this component, or any of the other components, is a narrow or inflexible situation--unless that is what is intended. Rather, the full range of locations, other persons involved, etc., that would be appropriate as antecedent conditions should be described.

Form 4.4

HAWAII INTEGRATION PROJECT
Instructional Program
Program: Greets familiar person

Date: 9/1/83

Student: C.

Trainer: MGN

Terminal Objective: C. will look, smile, or wave to greet a familiar person when first encountering the person each day.

Antecedent		Response	Consequence	
Natural	Instructional		Natural	Instructional
Location: Anywhere student encounters familiar person	bathroom, recess, hallway (all at school).	look, wave, or smile within 10 seconds of encountering familiar person.	Correct: familiar person responds to greeting or approaches and talks to C.	After familiar person leaves, teacher says, "C., you saw a friend today and you said hello," and pats C. on the back.
Other Persons: Any familiar person	classmates or "Special Friends" students from other rooms; teacher or teaching assistant.			
Materials: None	None		Incorrect: familiar person responds by repeating a greeting or familiar person may ignore C because C. did not extend familiar greeting.	Teacher repeats instructional cue. If still no response, teacher models a greeting.
Positioning: None	None			
Cues: familiar person approaches or is approached by C.; or eye-contact is made; or greeting is given.				

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Form 4.4

HAWAII INTEGRATION PROJECT

Instructional Program

Program: Opens stall door

Date: 9/1/83

Student: C.

Trainer: GL, NJH, MJN

Terminal Objective: C. will find a bathroom by either knocking on the door, noticing a person's feet under the door if there are several doors, or gently trying to open a door to see if it is locked

Antecedent		Response	Consequence	
Natural	Instructional	(short term objective)	Natural	Instructional
Location: Public bathroom in any environment	School bathroom, locker room bathroom	Grasps knob or latch and opens door	**Correct**: Door opens, student may enter stall and relieve bladder tension	Teacher praises C. and says "Yes, C., you can go to the bathroom now"
Other Persons: Other bathroom users (sometimes present)	Teacher or teaching assistant; other students using bathroom			
Materials: Stall doors with sliding latches, knobs (to be turned), or hooks	Same		**Incorrect**:	
Positioning: will be wearing shoulder strap to inhibit retraction	Same		Door does not open	→ Graduated guidance (see Antecedent)
Cues: Location in bathroom, closed stall doors, bladder tension	Graduated guidance: 3 - no instruction 2 - "open the door" 1 - T. points and taps latch 0 - Put through		Door opens, but stall is occupied; occupant shows surprise and may comment. C. must wait.	→ Teacher assists C. in closing the door quickly. Graduated guidance followed when occupant leaves stall.

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In specifying the location, the setting and the environment should both be included. If the response objective is one that naturally occurs in more than one setting/environment, a sampling of the range of those settings/environments should be listed. For example, the skill of greeting familiar persons should be taught across the school environment in the classroom setting, the playground setting, the hallways, the bathrooms, and the cafeteria. If it is not feasible to teach the skill in all of those settings, then a sampling of the environments might include the classroom (a very structured setting), the playground (an unstructured setting with children from many classrooms), and the bathroom (a small, informal setting). Being specific about the setting, and all other instructional variables as well, will contribute to consistency in instruction while assuring that instruction is directed towards generalization.

Identifying the other persons involved in the program is another important antecedent variable related to the consistency and generalizability of the program. Teaching a student to greet familiar persons may initially be taught using two classroom peers. Having specified that in the program, the teacher and teaching assistant should follow the same instructional program and, therefore, expect to record similar student performance during instruction. However, the teacher should realize that it will probably be necessary to expand the persons involved in the program to include other classroom peers, peers and adults in school situations outside the classroom, and home and community situations outside the school.

When materials are involved in instruction, it is critical that they be age-appropriate. It makes no sense to teach a skill using materials that would be inappropriate in the natural environment. Furthermore, materials used for instruction should be representative of the range of those materials that the student is likely to encounter across settings/environments. For instance, it would be important to teach the student to open more than one type of stall door for the bathroom objective already mentioned because there are several types of bathroom stall latches. As with the other antecedent variables, generalization of the response objective is more likely to occur if the training situation encompasses the range of appropriate variables.

Therapeutic positioning refers to the physical positioning of a student with a motor disability such that the student's motor performance is improved. Proper positioning should result in inhibiting abnormal reflexes and motor patterns, normalizing muscle tone, and facilitating normalized postural reactions and voluntary movement (Bobath, 1980). For many severely disabled students, proper positioning is essential for optimal motor development, and may often determine whether the student is able to make the required motor response or not. Positioning is usually accomplished through the use of adaptive equipment, prosthetics, and/or assistance from another person (therapeutic "handling"). If the student in this bathroom example had cerebral palsy, he might have difficulty grasping the stall door handle and opening the stall door because of retracted shoulders and outwardly rotated arms. The student could be assisted in opening the stall door if the teacher simply holds his shoulders in a forward position. Or better yet, the student could wear a simple fabric strap that brings the shoulders forward. For excellent information on handling and positioning for severely disabled students, the reader is referred to Finnie (1975) or Snell (1983).

Falvey, Brown, Lyon, Baumgart, and Schroeder (1980) define a cue as "initial information provided to a student before an action is performed" (p. 109). Natural cues are those cues that typically precede a response or "elicit" it in the natural (i.e., non-instructional) setting/environment. These cues should be specified in the written program because performing the response objective in the presence of only the natural cues is the ultimate objective for any educational objective. Therefore, specifying the natural cues identifies the cues that the teacher must "fade" to, or natural cues can be emphasized during instruction and then the emphasis can be gradually eliminated. Examples of natural cues for greeting a familiar person would be seeing a familiar person for the first time in a day, or a person greeting the student.

There are a large number of relationship cues and situational cues that are a part of the natural cues in the antecedent component (see Table 2.6); as much as possible these should be identified because they often indicate the type of appropriate social response for the situation. Greeting a familiar person requires that the student can identify persons who are acquaintances. Noticing that a familiar person is not engaged in conversation with another person is a situational cue suggesting that it would be appropriate to extend a greeting.

Falvey et al. (1980) describe the various types of instructional cues. The cues include models (e.g., the teacher says "hello" to another teacher in the hallway), direct verbal cues (e.g., "John, say, 'hello.'"), indirect verbal cues (e.g., "John, do you know that person?"), gestural cues (e.g., pointing, looking, or physically prompting to direct the student's attention), and pictorial cues (e.g., word, number, picture, or symbol). Frequently, cues occur in combination with other cues in the natural setting. Similarly, more than one cue can be used as an instructional cue. It should be noted that indirect verbal cues are particularly useful for calling a student's attention to relevant relationship and situational cues that help to indicate the appropriate response to be made by the student. The example of asking the student if he knows the person is an indirect cue instructing the student to attend to the relationship variable of familarity.

As previously mentioned, instructional cues are used in addition to natural cues or used to emphasize the natural cues. Instructional cues must be faded out in the course of instruction if the skill is to be functional and generalized to natural settings/environments. Instructional cues are the major "teaching" variables of the antecedent component, and therefore a great deal of emphasis has been focused on them in developing curriculum.

"Graduated guidance," or the "system of least prompts," and task analysis are two antecedent techniques that are typically used with a variety of instructional cues. In graduated guidance, the student is given the opportunity to perform a response without any instructional guidance first, and then if the student does not demonstrate the response, a minimally intrusive cue is provided. If the student still does not respond appropriately, additional cues are given that provide increasingly greater assistance until the student responds appropriately or is completely guided through the total response. For example, if the student encounters a familiar person in the cafeteria line, the teacher would first wait a few seconds to see if the student says "hello." If the student does nothing, the teacher may get the student's attention and then look towards the familiar person. If the student doesn't respond to that gestural cue, the teacher may then provide an indirect verbal cue and say, "John, don't you know that person?" And finally, if the student still has not said "hello," the teacher may provide a direct instruction, "John, say 'hello.'" Graduated guidance always allows the student to perform with as little assistance as necessary and is, therefore, frequently a good strategy for systematically fading from instructional cues to natural cues.

Task analysis is the process of breaking down a task into its simpler component tasks. A task analysis for opening a bathroom stall door might be: a) focus on door latch, b) grasp door latch, c) slide latch to the left, and d) pull or push the door open. Each skill is then taught in sequence: the teacher may select to teach all skills of the task analysis concurrently, forward chain the skills (teach the skills one at a time to criterion, beginning with the first skill, and guide the student through the remaining skills), or backward chain the skills (teach each skill to criterion, beginning with the last skill first, and guide the student through all the preceding skills). Whether the task analysis is taught concurrently, through forward chaining, or through backward chaining, each step in the task analysis should be recognized as the natural cue for the subsequent step. Well-constructed task analyses should reduce errors and thereby facilitate skill acquisition. Task analyses should also be constructed individually for students (e.g., focusing on the door latch might be appropriate for John's task analysis, but it may not be a necessary step for another student who also needs to learn how to open a bathroom stall door).

To summarize, the antecedent component includes the location, other persons involved, materials, therapeutic positioning, natural cues, and instructional cues, all of which precede the performance of the response objective. Generalization of the response objective is more likely to occur if the antecedent locations, persons involved, materials, and instructional cues are varied to represent the range of situations in which the response should be performed. The antecedent component of an instructional program is only one place in the program where "teaching" occurs; teaching will also be addressed in the consequence component.

The response component. The response component is the behavioral objective that the student is expected to demonstrate following the situation of variables described in the antecedent component. This objective may or may not be the terminal objective; it may be a short-term objective from a sequence of objectives leading to the terminal objective (e.g., the student may first be required to identify pictures of a familiar person before being taught to greet the person in the hallway), one step of a task analysis, or it may be the terminal objective. Regardless of whether the objective is the terminal objective or not, it should be taught as a response class as previously described (e.g., in teaching the student to greet a familiar person, a variety of appropriate greetings, such as saying "hello," smiling and waving, should be included in the objective).

The consequence component. The events that occur after a response (whether the response is correct or not) are described in the consequence component of the instructional program. These events, like the antecedent events, should be specified as either natural or instructional. In either case, the events provide feedback that may be reinforcing, punishing, or relatively neutral. Additionally, the feedback may serve a corrective or "teaching" function following incorrect responses.

Natural consequences should be identified because a primary goal of education must be to transfer control of behavior from instructional consequences to the contingencies that maintain behavior in the natural environment. Typically, artificial reinforcers are used in teaching severely disabled students because natural consequences have apparently been ineffective (i.e., the student would not be severely disabled if natural consequences were effective). Although reinforcement has been shown to be a powerful teaching technique, it has not been overwhelmingly effective for all severely disabled students. It is suggested, therefore, that a variety of reinforcers be used for instruction. The variety may serve a novelty function and thereby decrease the probability that the student will satiate on a single reinforcer. It is also suggested that instructional reinforcers be paired with natural consequences that follow correct responses, so that those natural events may acquire reinforcing properties and eventually serve to maintain correct responding without the artificial reinforcer.

Correct responses may be followed by other events that are not necessarily reinforcers, but may serve as additional instruction. For example, feedback may be provided to focus the student's attention on the response that "earned" the reinforcement through modeling the correct response (e.g., student greets familiar person, teacher then greets that same person), verbally stating what the student did correctly (e.g., "John, you said 'hello' to that boy that you play with during recess"), or emphasizing the correct response made by the student (e.g., student opens the bathroom stall door about one foot, teacher guides student to open the door wider).

A great deal of teaching occurs in the consequence component designed to follow incorrect responses. Such consequences are often referred to as correction procedures and they may follow or interrupt the incorrect response (Snell, 1983). Cues, similar or identical to those in the antecedent component of the program, may be repeated, or a different--perhaps, more salient cue--may be provided (e.g., if student does not reach for the door latch to open the bathroom stall door, the teacher may point to and tap the latch). Graduated guidance, discussed earlier as an antecedent component, could also be defined as a correction procedure because each level of increasingly more assistance is contingent on the student's failure to respond correctly. Another correction procedure is to provide a "put-through" to guide the student through the correct response if he or she fails to respond or responds incorrectly. Sometimes a put-through is reinforced to show the child the contingency for reinforcement. The effectiveness of reinforced put-throughs should be carefully monitored, however, because such a strategy may inadvertently teach the child to be prompt dependent and wait for the put-through each time.

On some occasions, teaching may be more effective if mildly aversive consequences, such as a mild verbal reprimand (e.g., "no") or a momentary withdrawal of attention (e.g., teacher looks away for a few seconds), are used in conjunction with a correction procedure. Strong punishers are not recommended as appropriate techniques to teach social skills. Instead, it is recommended that positive approaches to instruction be utilized in both the antecedent and consequence components of educational programs.

Two additional approaches to teaching that are consequent techniques are shaping and chaining. Shaping involves reinforcing successive approximations of the response objective. In teaching the student to open the bathroom stall door latch, the teacher may initially reinforce the student everytime he or she touches the latch. Later, the student will be reinforced only when he or she grasps the knob of the latch, and finally, the student is only reinforced when he or she moves the latch. Chaining is a strategy to teach a series of behaviors that should occur consecutively (i.e., in a chain). Reinforcement is delayed so that increasingly more behaviors of the chain must be demonstrated in succession in order to earn the reinforcement.

As with each of the previously discussed components of an instructional program, generalization is a concern that must also be addressed in the consequence component of the program. Reinforcement, correction procedures, and mildly aversive consequences should be the same or as similar as possible to those in the natural environment to increase the probability of generalization to the natural environment. Instructional reinforcers or correction procedures that are very artificial should be paired with naturally occurring consequent events and gradually eliminated.

Program Implementation

Instruction for high priority objectives should take place as frequently and appropriately as possible. If a program is not implemented with a reasonable frequency, learning cannot be expected to occur and the educational integrity of that program would be questionable (Voeltz & Evans, 1983). A further requirement of educational integrity is that the program must be implemented as planned. Such consistency will increase the probability of success in skill acquisition, and the systematic variation of antecedent and consequent events will make generalization more likely.

Added instructional time may be accessed by conducting incidental instruction when appropriate situations other than those specified in the formal program occur. Incidental teaching provides for generalization probes as well as opportunities for additional generalization training.

Program Evaluation

Evaluating student performance on instructional programs should be done consistently so that the teacher can identify when program changes are necessary. The type of measurement employed (e.g., frequency, latency, rate, duration, etc.) should reflect the important or functional features of the response objective and should be related to the criteria stated in the objective. In greeting a familiar person, for instance, latency would be a critical dimension in determining the appropriateness of the student's response. If the student waited too long to greet a person encountered in the hallway that person could be gone by the time the student finally says "hello." Again, generalization must be emphasized since it is critical if education is to have validity, and it is suggested that generalization probes be taken across nontrained situations to be assured that a skill has really been acquired. Forms 4.5 and 4.6 are sample data sheets for individual and group skill sequences described earlier in this chapter. Data from these programs must be graphed in order to evaluate the student's progress. If progress does not seem to be adequate, it is recommended that the antecedent or consequent component be changed, rather than changing the response objective to make the skill "easier." Research has indicated that "stepping back" to an easier step of the task rarely results in an improvement in student performance (Haring, Liberty, & White, 1980).

After the student has learned to perform whatever social skills are most critical to him or her and these primary objectives are met, the teacher should target other lower priority routines and activities listed on the Priorities Worksheet (step 4 of the assessment process). As the teacher goes through this long and often complex cycle of assessment and instruction, he or she needs to keep in mind the ultimate goal: to help each student in the class choose roles and learn the necessary skills to become a functioning member of his or her community.

Form 4.5

HAWAII INTEGRATION PROJECT

Data Sheet

Date: 9/12/83

Student: C

Trainer: MgN NH & GL.

Data Key:
- + correct
- — incorrect
- m model
- na not appropriate
- sec. seconds (duration)

Program Name(s):
- greeting
- requests
- attending

Settings:
- bathroom
- recess
- hallways

Dates and Trainer's Initials

ICS	9/12/83 MgN	9/13/83 NJH	9/14/83 GL	9/15/83 GL	9/16/83 MgN
(8¹⁵-8³⁰ bathroom)					
1. greets (+ — m na)	—	na	—	na	m
2 requests (+ —)	—	|	—	|	—
3. attends (sec.)	2	|	7	|	4
(9³⁰-10, recess)					
1 greets	—	m	m	m	m
2 requests	—	—	—	+	+
3 attends	—	3	2	11	8
1 greets	m	—	m	+	m
2 requests	+	—	+	—	—
3 attends	3	2	5	4	9
1. greets	—	m	m	m	+
2 requests	—	—	+	+	+
3 attends	5	4	6	7	8
(11¹⁵-11³⁰, hallway)					
1. greets	m	m	m	m	+
2. requests	—	+	+	—	+
3. attends	3	4	5	8	8

An individual ICS data sheet for a general skill sequence. The skill sequence may be repeated five times in the morning across three school settings.

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Form 4.6

HAWAII INTEGRATION PROJECT
Data Sheet

Students: A, B, & C

Trainer: GL, NJH, & MgN

Data Key:
sec. seconds (duration)
+ correct
− incorrect
C repeated cue
0 put through
1 physical prompt
2 verbal cue
3 no assistance

Activity: Hygiene

Setting: Bathroom (p.m.)

Student	Skill	Dates and Trainer's Initials																		
		9/12/83 GL	9/13/83 GL	9/14/83 NJH	9/15/83 NJH	9/16/83 MgN														
A	attends (sec.)	3	1	5	2	6														
B	wheels chair (sec.)	94	97	75	46	54														
C	follows directions (+,C,−)	−	C	−	C	+														
A	greets (+, m, −)	m	−	m	m	m														
B	signs "hello" (+, m, −)	−	−	m	−	m														
C	waves "hi" (+, −)	−	−	+	−	−														
A	greets (+, m, −)	−	−	−	m	m														
A	requests (+, −)	−	−	+	−	+														
A	attends (sec.)	4	3	4	3	4														
A	adjusts clothes (0,1,2,3)	1	0	1	2	1														
B	washes (0,1,2,3)	0	0	0	1	0														
B	wheels chair (sec.)	87	90	66	76	43														
C	washes (+, −)	+	−	−	+	−														
C	follows directions (+,C,−)	−	−	C	C	C														
A	washes (0,1,2,3)	1	0	1	1	1														
A	attends (sec.)	2	5	5	6	5														

A group ICS program for a hygiene activity involving three students. Note that Student A is the same student described on Form 4.5, and the generic sequence (greets, requests, attends) of the individual ICS is repeated in this group ICS.

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APPENDIX A

Social Skills Curricular Strategy Forms

Form 3.1

HAWAII INTEGRATION PROJECT

Current and Subsequent Desired Roles and Environments

Date:________

Student:______________________________

Rater:______________________

	Role	Environment	Routines and Activities
Present Future			
Present Future			
Present Future			
Present Future			

rm 3.2

HAWAII INTEGRATION PROJECT

Inventory of Present Routines and Activities

Date: ____________________

udent: ______________________________ Rater: ______________________________

Day Date	Approximate Time Period	Environment Setting	Role	Routines and Activities

Form 5.3

HAWAII INTEGRATION PROJECT

Priorities Worksheet

Date: ____________

Student: ______________________________ Rater: ____________________

Part I

a) Select three to five of the most important routines or activities that relate to each specific heading, and rank them in order of importance. If a routine or activity is important to more than one criterion heading, it should be listed under all the relevant headings.

Of Greatest Importance to Parents	Meets Wide Range of Human Needs	Most Likely to Contribute to LRE or Integration	Occurs/Needed in Multiple Environments/Routines

Part II

a) Circle those routines or activities that appear in more than one column.

b) Based on rank order and repetition, rank all the circled items on one master list.

PRIORITIES

1.
2.
3.
4.
5.
6.

Form 3.4

HAWAII INTEGRATION PROJECT

Social Skills Assessment

Date: ____________________

Student: ______________________ # Peers Present: ____ # Adults: ____ Rater: ____________________

Setting: ______________________ Routine/Activity: ______________________ Time Period: ____________________

PART I

a) In the Observation column below, code the student's social interaction behaviors in the context of the identified setting and routine/activity.

b) In the Post-Observation column, write comments about behaviors that were not observed (or not observed at an appropriate frequency) but would be useful and/or adaptive to the setting and routine/activity. If behaviors were socially inappropriate, note the reason(s).

BEHAVIOR CODE

v:	vocalization or verbalization
s:	formal sign language
g:	gesture/facial expression/non-verbal communication
e:	social eye contact
..:	preceding coded behavior occurred repeatedly
--:	preceding coded behavior was socially inappropriate

SOCIAL SKILL	OBSERVATION	POST-OBSERVATION
Gains entry/greetings		
Initiates question/statement/preference		
Responds to question/statement		
Chooses among materials, activities, etc. presented		
Imitates model		
Follows directions		
Follows activity's rules		
Accepts assistance		
Requests/offers assistance		
Takes exit/farewells		

PART II

	CIRCLE ONE		
1. Was the social nature of the routine/activity passive or active?	passive		active
2. Rate the student's level of social participation in the activity?	low	medium	high
3. Was the student's social behavior "typical" of him/her?	yes		no
4. Did the student demonstrate the necessary task-related skills (motor, cognitive, affective) to engage in the activity?	yes	partially	no

PART III

Summary - major social skill needs of routine/activity: ______________________________

____

____

____

____

____

____

____

orm 4.4

HAWAII INTEGRATION PROJECT
Instructional Program
Program: ______________

Date: ________________

tudent: ______________________________________

Trainer: ______________________________________

erminal Objective:

Antecedent		Response	Consequence	
Natural	Instructional		Natural	Instructional
ocation:			Correct:	
ther Persons:				
aterials:				
ositioning:			Incorrect:	
ues:				

Form 4.5

HAWAII INTEGRATION PROJECT

Data Sheet

Date:____________________

Student:____________________________ Trainer:____________________________________

Data Key: **Program Name(s):** **Settings:**

ICS	Dates and Trainer's Initials																				

An individual ICS data sheet for a general skill sequence. The skill sequence may be repeated five times in the morning across three school settings.

Form 4.6

HAWAII INTEGRATION PROJECT
Data Sheet

Students:____________________________ Trainer:____________________________

Data Key: Activity: Setting:

Student	Skill	Dates and Trainer's Initials																		

A group ICS program for a hygiene activity involving three students. Note that Student A is the same student described on Form 4.5, and the generic sequence (greets, requests, attends) of the individual ICS is repeated in this group ICS.

APPENDIX B

Articles Describing Special Friends Program

Educational Perspectives, 1979,
18:4, 29-32.

THE SPECIAL FRIENDS PROGRAM: AN INTERVIEW

Chris Kube

During the 1978-79 academic year, the Department of Special Education at the University of Hawaii received CETA Title VI Special Projects funds to sponsor the Special Friends Program at Kainalu Elementary and Kailua Intermediate Schools in the Windward Oahu School District. At each of these schools project staffs worked closely with Department of Education professionals (principals, counselors and the special and regular education teachers in particular) to structure systematic interactions between children in regular education and their severely handicapped peers. Evaluation data reports and a working draft of the facilitator's manual from that project year are available from Luanna Voeltz, Department of Special Education, University of Hawaii. A proposal has been submitted for federal funding to support a comprehensive, three-year model project beginning in 1980, in both the Windward Oahu and Hawaii school districts. However, Special Friends did not originate at either the University or in the Department of Education. The kernel idea for Special Friends and its initial form were the sole product of Chris Kube, the parent of a nonhandicapped child. Hopefully, the interview which follows communicates some of the enthusiasm and community spirit which Kube and the program nurtured in the effort to ultimately bind handicapped and nonhandicapped alike into a social unit—extending far beyond the school day and into each child's present and future interactions with *all* of his or her peers.

Luanna Voeltz: Before we begin discussing the details of the Special Friends Program, would you explain how the program began?

Chris Kube: I was a VISTA volunteer during the 1977-1978 school year, and was assigned the task of developing unique volunteer programs for the State Volunteer Services. In November 1977, my daughter Noelle forgot some money she had been asked to take to school—Kainalu Elementary School—that day. Since it was needed for an activity of some sort, I intended to stop briefly on my way to Honolulu to drop off the amount with her teacher. After delivering the money to her classroom, I saw a number of children in wheelchairs being pushed toward the cafeteria. I was to learn that these children were enrolled in the Severely Multiply Handicapped (SMH) classroom (Kainalu is the Windward Oahu SMH District Center in addition to enrolling primarily regular education children). I don't think I have ever felt so many feelings at one time before. Shock, fright, curiosity, discomfort, and surprise at my discomfort—waves of feelings. Trying not to stare, I walked to my car.

Voeltz: Was that really the first time you had seen severely handicapped children?

Kube: I had seen one or two adults in wheelchairs at various times in my life, but certainly at a distance and I had never seen little children like those at Kainalu; this was a new experience for me. As a child, when I was in elementary school, children with visible handicaps were not on my school campus and I suppose I had never really thought about handicaps or being near children or persons with handicaps prior to that morning.

Voeltz: So you decided to do something at that point, as a reaction to those feelings you had?

Kube: Yes, it was almost immediate. I sat in my car in the parking lot for a while, trying to sort out my feelings. If I felt such a range of emotions, surely other adults and perhaps the children at Kainalu might be experiencing similar emotions. My background in people-oriented activities has taught me to deal with feelings and emotions openly, rather than deny their existence or expecting unpleasant feelings to pass with time alone. I was interested in finding a way to help the children at Kainalu, in particular, to explore

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their reactions and learn to feel comfortable with handicapped children so that the shock I had felt would never be a problem for them when they grew up.

The core of my idea was a feeling which children knew—friendship. I knew I wanted to arrange some kind of special program which allowed the regular education children and the severely handicapped children to interact with one another, so I began my work. I discussed my ideas with several friends and then developed a plan of action. I decided that the interaction between the two groups of kids—which I would call "Special Friends"—would be one major activity. Also, the regular education kids should meet as a group with me and with certain professionals to give them an opportunity to ask questions and, in fact, tell us adults how to help them be comfortable with the handicapped children. When my plan was ready, I presented it to Mr. Kengo Takata who was at that time the Windward Oahu District Superintendent,[1] and he approved it. Then, with the help of Mrs. Sakae Loo, the Kainalu principal, and Mrs. Sue Gardner, the Kainalu school counselor, I began some information gathering on campus to prepare myself for the program. I spent a great deal of time in the Special Education Department (in classes for the moderately mentally retarded—MRT—as well as the SMH class) during November 1977 to January 1978, so that I would at least have some knowledge of what the handicapped kids were like. During this time, I obtained the volunteer assistance of several persons to put together a slide presentation to orient the school and an initial questionnaire to find out how the regular education kids felt about the handicapped kids.

Voeltz: Perhaps this might be a good place to say a bit more about the slide presentation . . .

Kube: Sunny Aigner, who was later hired on the CETA grant during the 1978-1979 year to run the program with me, donated her photography time and skill. She took literally hundreds of pictures of the special education children, and we carefully selected a series of slides which is extremely positive and "universal" in affect. These slides show the children in a variety of school and life activities, and seem to capture the "best" moments which children could relate to in a personal way. The narration of the slide show was provided by a professional announcer, talks about "a special kind of friendship," and asks the children to consider being a "Special Friend" rather than to pull away or feel uncomfortable. We used a popular song about friendship to introduce and end the show; everything moves very fast (the slide show lasts only about five minutes) and is, we think, a very upbeat presentation. I think it is important that the pictures were taken at the school where the slide show as used; when we later presented the slide show to each classroom, there was much animated discussion as the kids recognized each other!

Voeltz: Yes, I agree. Your presentation "personalizes" the handicapped children, which is quite different than the more "knowledge about handicaps" type programs which are becoming increasingly available for children. I am concerned that just giving children information about handicaps will simply teach them to "label" or stereotype these children, rather than see that each handicapped child is another person who is both like us and has some special needs. The needs are part of that child, but should not be used to describe the child as a *person*.

Kube: We noticed that when we showed the slide show in smaller groups (i.e., one classroom at a time), the regular education children were much more open in their discussion of who was in the pictures; I was surprised at how many of them already knew the names of the severely handicapped children! When the slide show was shown in larger groups (i.e., several classes together in the cafeteria), the children were quieter and did not tell us as much. I think the smaller groups allow the children to be personal—much more honest and free with their feelings and with information.

Voeltz: So you showed the slide show to all the regular education children at Kainalu. What happened next?

Kube: I planned to run the program with a core of twenty fourth, fifth and sixth graders. As it turned out, nearly six times that many children volunteered to be part of Special Friends after they saw the slide show! The kids and I agreed on random selection procedures, and the twenty kids who were chosen volunteered their morning and noon recess periods about six times each week. There were regular group sessions with me where the children were encouraged to talk about their experiences as volunteers. The sessions with the special education students began with group activities (games, singing, etc.) and gradually evolved into one to one learning activities in many cases. I was responsible for the group sessions, which included everything from just talking about being a Special Friend to Yoga, role playing and even a discussion with the school nurse on what epilepsy was like. The interactions between the regular and special education kids were actually structured by each of the special education teachers.

Voeltz: How did that work, with the special education teachers taking on that responsibility?

Kube: Their efforts influenced the success of the program tremendously. The special education teachers were enormously helpful and supportive. The regular education kids had often hovered around the classroom before the program began; now with the program there seemed to be something to do. Most of the teachers were committed to the idea that exposure to the non-handicapped children could be a positive experience for their kids, and they helped the regular education children by showing them what to do. I think, though, that it is important to realize that not all the teachers initially agreed with the program, and we had one or two special education teachers who felt strongly that their children needed to be protected from the exposure.

Voeltz: Yes, we collected some teacher survey information on this issue, and actually the input of all the teachers provides helpful suggestions and insight into how future efforts might deal with this kind of hesitation.

Kube: Mrs. Loo, the Kainalu principal, really assisted us with her support of the program. She was particularly concerned that sometimes the regular and special education teachers themselves are isolated from one another, and she tried to get these two groups to communicate more with each other rather than seeing themselves as separate.

Voeltz: Chris, your program had such an impact that first semester that within three months the *Honolulu Star-Bulletin* ran a special feature story and your efforts were included in the Department of Education's videotape presentation of the SMH District Centers, *Holo i mua*. Although I read the newspaper story also, I was even more impressed by the enthusiastic reports I received from a couple of our graduates who were teaching special education classes at Kainalu. I called you and when it looked like the program would end when your VISTA position ended in August 1978, we wrote the CETA proposal to try to do even more during the following year. Would you explain briefly how the program was different during 1978-1979?

Kube: Well aside from the evaluation efforts (graduate students from the Department of Special Education helped us collect information), we were able to do more with the kids also. First of all, in addition to running Special Friends at Kainalu with fourth, fifth and sixth graders, we ran a second program at Kailua Intermediate involving seventh graders. This also meant school-wide orientation programs. We tried to involve more children in some kind of activities with the special education kids, especially at Kainalu. The teachers told us that the younger children in particular needed some orientation, so we conducted a series of small group activities. We would take one SMH child into a small group of regular education children, or have a group of regular education children visit the SMH or MRT classrooms. The regular education children were allowed to touch the special equipment; even to sit in the wheelchairs. They learned how to hold the younger SMH children on their laps if they wanted to, and how to say hello and talk to them. The regular education children seem to really enjoy playing with the SMH children with special toys, and taking them for rides in the wagon at recess, for example.

Voeltz: Do you think that the special education children benefited from the activities?

Kube: The regular education kids told us things like before the program they simply walked past the special ed kids without saying anything, whereas now they would say hello. The regular education children provided lots of social interaction opportunities for the special education kids, on their own turf and level. Some of the volunteers actually learned how to be a tutor; one Special Friend learned how to play with her SMH Special Friend on a Language Master special "talking" program the teacher had designed. That was extra learning practice for her!

Voeltz: And what do you think the regular education children got from the program?

Kube: The attitude survey responses showed a definite, positive shift in the attitudes of all the regular education children at the project schools; they were more accepting of differences and handicaps as compared to kids at schools without a similar program, at least according to their questionnaire results. My hope was that children would grow in self-esteem as a result of sharing their time and abilities in a way like this. The volunteers certainly formed new friendships. They gained experience in program planning and new skills in communication, self-relaxation and concentration. We had one incident where one of the SMH children had a major seizure on the playground during recess; two fifth grade "Special Friends" handled the problem exceptionally well and without heroics! Everyone later commented on how maturely they had behaved, and even the parents of one of the girls expressed their admiration for the matter-of-fact way that the child had related the incident at the dinner table; she seemed so self-assured and competent to them.

Voeltz: Since the Special Friends program has been supported with outside funding since it began, readers might be concerned that they could not start a program like this without extra funds. Do you have any suggestions as to how a program like Special Friends could be conducted without the extra money?

Kube: Actually, the only outside support we had was for staff. While staff is obviously important, I think the program could be run by a combination of community volunteers (perhaps including university practicum students) and existing school staff. Special Friends relied a great deal on the involvement of Sue Gardner, the counselor at Kainalu, and the special and regular education teachers, for example. Because the program is basically socially oriented, a community person such as an interested parent (or a small group of parents) could easily conduct the activities. We've written a facilitator's manual, in fact, to provide basic guidelines to starting and continuing the program. Within the school system staff, I would choose the school counselor to coordinate things.

Voeltz: How much volunteer time would the program take?

Kube: If run as a volunteer program, the orientation activities would take a week or so of two to three hours daily, or two to three days of full time effort for each school. After that, only a couple of hours each week of volunteer time could keep it going.

Voeltz: Aside from the possibility that a parent volunteer might actually run the program, would you like to see more parent involvement?

Kube: Yes I would. This was never properly developed during Special Friends. However, when parents were called for special events there was a good response. On two separate occasions, regular education children took the initiative and invited their parents to school (and they came) to watch their activities as a Special Friend. I would like to see more of this kind of parent participation. Personally, it was a great experience for me to have my daughter in the program.

Voeltz: What do you see as the long term effects of a program like this? For one thing, do you think that the children will continue to interact with one another outside of the program?

Kube: This has already happened. After the first complete year of our program, we found out that at least two of the regular education children who had been in the program during the year spent time with their severely handicapped Special Friend during the summer. A sixth grade Special Friend spent at least one afternoon each week during the summer with a severely handicapped child who lived down the block from her. And a seventh grader from Kailua Intermediate actually took the bus several miles to continue her special friendship. We hadn't tried to collect this information for the children during the summer, so we really don't know how many additional examples of this might have occurred. We know about these two cases because the parents told the special education teachers. The parents were delighted with what they thought was a new and positive experience for their children.

Voeltz: We'll be reporting some information later on parents' feelings and impressions about the program, but since you did the preliminary telephone survey of the parents of the regular education Special Friends, why don't we end the interview by having you tell us what some of their comments were?

Kube: Well, calling the parents was terrific reinforcement for me! All of them were pleased with their child's participation in Special Friends, and thought that the program was good for him or her. We asked those parents, by the way, what they thought about the severely handicapped children being in school at Kainalu. No one was negative about their presence, and the reaction which I got most often was "It's about time . . ."

Footnotes

[1] Mr. Takata is currently the Honolulu District Superintendent.

Chris Kube is originator and implementer of the Special Friends Program. She graduated from Kailua High School in 1965 and has been a secretary and administrator. She has also been an active volunteer for Habilitat, the Hawaii State Hospital, The Place, Hale Kipa, and the Salvation Army Alcoholic Treatment Facility.

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Education Unlimited, 1980,
2:1, 10-11.

SPECIAL FRIENDS IN HAWAII

Luanna M. Voeltz

As school districts throughout the country establish noninstitutional educational services for severely handicapped children, where to locate these classes is often a controversial question. Some educators argue that the "least restrictive placement" mandate of PL 94-142 is satisfied by a special school which is community-based, and that severely handicapped and nonhandicapped children have little to gain by interacting with one another (Burton & Hirshoren, 1979). Other educators maintain that such interaction is crucial if severely handicapped and nonhandicapped persons are ever to develop the ability to live together in the community.

Since the neighborhood public school is the only environment which allows for daily and longitudinal interactions, this should be the placement of choice (Brown, Branston, Hamre-Nietupski, Johnson, Wilcox & Gruenewald, 1979; Sontage, Certo & Button, 1979). In Hawaii, the question of where to locate classes for severely handicapped children is not an issue. The combination of community school placements and a program called "Special Friends" has provided evidence that both handicapped and nonhandicapped children benefit from going to school together.

A statewide decision was made to interpret the least restrictive environment as the neighborhood public school. Beginning in 1977, classes for moderately to severely/profoundly handicapped children were located in regular elementary, intermediate, and secondary schools. The expectation was that it would work, and indeed, we believe it has.

Almost immediately, teachers reported that many nonhandicapped children were spending their recesses in the special classrooms and were inviting their severely handicapped peers to spend time with them on the playground. Their spontaneous questions indicated that they were concerned and interested in knowing about the handicapping conditions of their new special friends. The continuing daily visits prompted the parent of one nonhandicapped child and school personnel to start the "Special Friends" program.

The Special Friends in Kailua

During the 1978-1979 academic year, the Department of Special Education at the University of Hawaii received CETA Title VI Special Project funds to support an expanded Special Friends program at Kainalu Elementary and Kailua Intermediate Schools in Kailua, Hawaii. In addition to orientation activities directed to all the regular education students at each school, the program consisted of scheduled opportunities for interaction between a group of regular education Special Friends selected from grades 4 through 7 and their severely handicapped peers.

Each nonhandicapped child spent three weekly recess periods with a handicapped Special Friend; an additional one to three weekly recess discussion sessions involved all the regular education participants meeting with the program trainer at each school. The nature of the one to one interactions between children was structured by each special education teacher, and included a range of activities from peer tutoring to free play. The group discussions included activities intended to support sensitivity, awareness, and communication skills; the nonhandicapped children were particularly encouraged to share questions about their handicapped Special Friends and to involve their nonhandicapped peers in their new experiences.

Since this kind of interaction is quite different from past opportunities and experiences available to children, evaluation was a major focus of the first project year. Ongoing planning is incorporating information provided by the children themselves to facilitate the development of positive experiences. What follows is a selective—but representative—sample of the reactions of some of the regular education children to the presence of their handicapped peers and to the friendships which were the focus of the program. While many of these children's comments were obviously influenced by the project activities, they still reflect the incorporation of Special Friends into each child's individual value system and personal perspective on social interactions.

Being in the Special Friends program helps people learn to make friends with other people. It also helps us to realize why other people may look or act or speak differently.

Liane, Grade 6

I don't feel shock or pity. I think of them as people. I have an uncle who is mentally retarded.

Chloe, Grade 7

I love being in Special Friends. When I first saw the movies I was unsure and afraid of them. Now I feel secure. I like

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them because they run up and say "Hi" and show their affection. I get a chance to be with people I don't really understand and learn about them.

Dawn, Grade 7

I felt a little frightened at first. I feel very comfortable now.

Frank, Grade 7

It was my first year at Kainalu when I became a Special Friend. My friend came up and said, "Do you want to go to the SMH class?" And I said, "What's that?" She said, "You mean you never heard of that?" So we went to the SMH class. Marty was the teacher there. I was scared at first but I got used to it. It was fun working with the kids.

Special Friends gives me the opportunity to meet new friends. I have met a few that I really like. At first I was afraid of them. If you don't like what they're doing you just tell them. It's OK to tell them, like instead of hugging me I tell them to shake hands.

Becky, Grade 7

The next year my friend moved away. I was on my own so I told more of my friends and they came to the class. They liked it too. . . . I'm working with Michael now. He is deaf. And he has a walking problem. This is my third year in Special Friends, and I love it.

Margi, Grade 6

I didn't know about Special Friends. I just went [to the SMH classroom]. I used to see Tammy on the bars. Now I see her in Special Friends. I like going to the classroom.

Erica, Grade 4

I think they need more attention and help. They need more friends. I kind of feel sorry when they get teased. They feel we are very special to them.

Michelle, Grade 7

Before I was in the Special Friends program I was afraid of the special ed students because I thought they were weird. But now that I'm in the Special Friends group I've learned that they're just as friendly and just the same as any other kid in this school. Now whenever I see them around the school I say "Hi" to them. But before I just walked past them and said nothing. The only thing different about the special ed kids that is different than us is that they were born in a special way. And I think that many other schools that have special education students should have this program because it is interesting and you learn a lot from it. But the most important reason is that you know you're helping someone and being a Special Friend to them.

Anna, Grade 6

It's interesting because it gives me a chance to meet some different people, and they get to work with you. I feel it would help me if I went to a different country so I wouldn't be afraid of the different types of people.

Mike, Grade 7

I have a chance to meet other people and see how they feel. I understand more and I don't really feel that sorry for them. Because if you treat them like a person they feel more like a normal person.

Mary, Grade 7

It's fun to teach them. I read them books. I play with them. We sing. I help Susi walk.

Boyd, Grade 5

Well, I think that this is the best year I had with the handicapped kids and the special retarded children. . . . And I had a lot of fun with the best friends I ever had in Terry, Rita, Janna, and Sara. Including Gloria's class and here is who I had great fun with: Rene, Barry, Ginny, Thomas, Rachel, Lynn, and best of all Kelly.

Sherri, Grade 4

I know they are happy when we come. That makes me feel good.

Donna, Grade 7

In marked contrast to the picture and comments of the children here, we as educators must recognize that most of us grew up in "segregated" childhoods. Professionals can plan the initial structure of integration efforts, but children like Hawaii's Special Friends may ultimately provide the expertise to design optimal programs. At the very least, we cannot underestimate their ability to enjoy positive interactions with one another simply because such opportunitites were not part of our experiences.

REFERENCE NOTE

Written program description and formal evaluation data reports on the project are available from Luanna M. Voeltz, Ph.D., Department of Special Education, 1776 University Avenue UA1-3A, University of Hawaii, Honolulu, Hawaii 96822.

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APPENDIX C

SIOS Description and Data Analysis

SIOS Description and Data Analysis

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The Social Interaction Observation System (SIOS)

The SIOS is essentially a sign observation system which enables us to observe objectively the interactions between handicapped and nonhandicapped children, the focus of our project. The SIOS is an essential instrument in our evaluation of the program. It provides us with information about the quality of the interactions between the handicapped and nonhandicapped children so that we can improve the implementation of the program, and improve the quality of the interactions between the children.

The SIOS is essentially a sign system where a number of behaviors can be checked simultaneously. Two different dyad situations will be observed: 1) a dyad of special education-regular education children; and 2) a teacher with the special education child. The observation session begins by the observer first recording some background information about the setting, who is being observed, who is doing the observation, etc. Then, the actual observation begins. The observer focuses on one member of the dyad, watches for a brief interval (10 seconds), then records results for a brief interval (again 10 seconds). About forty behaviors are observed. These include such things as the orientation of the person, his/her affect, position to the other member of the dyad, whether touching occurs, what objects are present, what kind of play behavior is occurring, vocalizations, and intrusions that occur.

A copy of the observation system (SIOS) is included in this section. The first page of the SIOS is simply a title page. Page 2 has three sections to fit it. First, there is a section that is completed before the observation begins. Information such as observer codes, the school code, dates, and I.D. numbers for the handicapped and nonhandicapped person may be coded. The number of other people in the room, any special conditions, such as the room being rearranged or a move to a new room, are recorded on this page. Critical incidents are also noted; if the special education child has had seizures or sleep problems or some medication change, this will be recorded, as it could very well affect the data. Next, two procedural details are recorded: 1) the time sampling interval (this will probably be the ten-second record interval); and 2) the type of observation (whether it is primary data, practice or reliability data). We will occasionally do reliability checks, when two observers watch and code the same behavior.

The second section is completed just before the observation is about to begin, and it consists essentially of some timing parameters. We will measure when he or she begins interaction with the special education child. This data will be collected only for scheduled interactions between regular education and special education children. From it we get some indication of the implementation of our program. There is a certain time frame when they are supposed to be interacting, and we will see if indeed they are. There will probably be individual differences in how long it takes a child to reach the classroom, and there will be differences in how long it takes from the time the room is entered until the interaction really begins. This may very well relate to certain motivational factors, and we may find differences in the quality of the interactions later on that are correlated with the length of time it takes from entering the room to beginning the interaction.

Finally, on this second page is a brief section that is completed after the observation. So, after the next two pages are completed, the observer comes back and fills out a couple of points here. First, we would like to know an overall rating of the special education student's arousal prior to, during, and after the observation session. This enables us to get some idea of the overall effect of the interaction session. And we can also see if prior arousal affects the quality of the interaction. So we can begin to answer a couple of questions here. We are also interested in the eye level of the nonhandicapped person relative to the special education child.

The next two pages of the SIOS are identical. These are the heart of the observation system itself. First, at the top is a code labeled "Non Number." In this, for each observation period, there is a column and you will check which nonhandicapped person is being observed. Either Person #1, Person #2, or possibly some other person. The Numbers 1 and 2 correspond to the previous page where we have recorded the number of the first non-sped I.D. Number or the second non-sped I.D. Number. We closely monitor only two people. If other people enter into the situation, we don't keep track of their I.D. Number. We simply code them as other. Next, for each of the ten-second intervals in which we observe the nonhandicapped person, we check whether they are inside or outside.

At the top over to the right we can also check what activity is occurring, moving around, playing with toys, music, etc. Now, below the horizontal line are the lists of behaviors, one side for nonhandicapped and the other side for the handicapped. We begin observing on the left-hand side, which is the handicapped. Then after a ten-second observation, ten-second recording, we move to the other side and observe behavior's over there. Next, back to the nonhandicapped side. This alternation continues for the duration of the observation.

Behaviors on each side are very similar, but not identical. They cover the areas mentioned previously, beginning with orientation, then affect, and then position. Now, since this is a sign system, all behaviors that occur during the interval are checked. It is possible, although highly unlikely, that every single circle in a given column could be checked.

There are twenty columns on each page for a total of forty columns. To complete one column requires possibly ten seconds observing and ten seconds recording for a total of twenty seconds. We have forty columns; twenty seconds would be eight hundred seconds, or translating to minutes would be thirteen minutes and twenty seconds. This is the maximum length of time that we would be able to observe the record behavior. Now, there will probably be some instances where we won't be able to get the full thirteen minutes and twenty seconds.

From this we should be able to determine a number of things. First, are the children interacting when they are supposed to be, or are they doing something else? Second, if they are interacting, we want to learn more about the nature of these interactions; what kinds of general play activities are they engaging in? Third, we would like to monitor the impact of the interactions upon the special education student. Does his or her behavior change when s/he is with the regular education child? If so, does this change persist after s/he has left? Are interactive skills learned which generalize to other situations?

We will also observe the regular education students for behavior changes: Do they learn interaction skills? Does their enjoyment of the play situations increase as time passes? Do they initiate interactions during free play period? (We'll be observing free play periods also.)

Finally, we hope to learn what effects specific regular education behaviors have on particular special education children. While our primary interest is in the scheduled interaction between regular education and special education students, we are also interested in observing behaviors of the special education students during free play time, and during interactions with teachers, in order to determine what differences, if any, exist. As time passes, we hope to see some convergence in the interaction behaviors in these three situations: scheduled regular education-special education interactions, unscheduled regular education-special education interactions, and teacher-special education interactions.

Reliability

The sample. The two primary observers, doing 80% of the data collection, jointly observed 44 sessions of approximately 20 intervals each for a total of 649 observation intervals. These observations were on nine different special education children interacting with eight different peers or teachers.

The results. Phi and kappa coefficients were computed for each of the 44 special education behaviors observed and for each of the 44 nonhandicapped behaviors. These data are displayed in Table 1. Three kappas are below .70, ten are below .80, and 25 are below .90. Thus 63 of the 88 coefficients are above .90 reliability. The lowest kappa was .65.

Thumbnail Sketches of Each of the Children (Written by Observers)

No. 018: He uses a wheelchair, which he can manipulate quite well. His coordination seems poor and he has a difficult time using his hands when working puzzles and recorders, but with time he manages. He finishes puzzles and can tune in a small radio. He can crawl. He is a very happy individual when receiving attention, but becomes angry and jealous when attention is directed to others. He can say a few words but cannot converse with anyone. He is lovable.

No. 026: She is sweet and not disruptive. She just sits and doesn't seem too interested in anything. She can move her hands and touch toys that are suspended. She cannot manipulate her wheelchair. When interaction is occurring she smiles and responds, but does not focus on objects or person with much interest. Her head droops forward most of the time.

No. 025: She is dainty, well dressed and pretty and it is obvious that she is adored by her parents and family. She responds to love and seeks it constantly. She whines if left for any length of time. She can sit up in a wheelchair and also on a mat for a short time. She can use her hands but does not manipulate her wheelchair. She makes non-language sounds. She is pleasant, smiles and seems happy. She responds to instructions but her interest span is short. She does focus her attention on Non and on objects.

No. 011: He is adorable. He is bright and really would love to converse. He is interested in everything and has shown great progress this year. He can manipulate his walker, but not his wheelchair. He is always smiling and friendly. He responds to Non and gives direct and non direct words. His vocabulary is small but he tries to answer. He obviously has great support from his family. He responds to instructions and wants to achieve.

No. 023: He appears to be a perfect child. He can run, play, use his hands, but does not talk. He makes non-language sounds. He is a handsome child. He is very disruptive sometimes. If he is playing with something he likes he can be sweet and quiet. When interacting with Non he is very difficult most of the time, but when cooperative he follows instructions and does very well. He seems very hyper and uncontrollable, but has an excellent teacher who knows exactly how to handle him.

No. 069: He is cheerful, optimistic, can carry on a small conversation, joke and talk to people. He is aware of people in the room. He uses a wheelchair but cannot push himself. He does feed himself.

Observations of Severely Handicapped Students

Discussion of Tables 2-12. The following eleven tables provide information about interactions with special education children. Each table contains information for each of six special education children separately. In this way the individuality of the data for each child is not lost but due to the presence of six replicates some general conclusions may be posited. Collapsing across children with very different behavioral repertoires would probably distort the interrelationships and is not done in any analysis in this document.*

Mean levels for SPED and NON behaviors

Table 2 details for each of the six selected SPEDS their mean percentage level on all of the behaviors observed by the SIOS observation system for the 1981-1983 year. Each observation is comprised of twenty intervals, during which each of the behaviors could occur or not occur A percentage is gotten by comparing the number of occurrences to the total possible number of intervals, which is twenty. These percents are then averaged across the number of observation points. For example, for SPED 11, Table 2, there were 52 observations. Each one of these observations had twenty intervals in it and for the first variable which was observed, SORNON stands for SPED "Orient to NON", he was oriented 11.5% of the time to the non. The standard deviation of this was 22.6. There was an interval where he did not orient to the non at all--0% of the time; and there was another observation where he was oriented to the non 100% of the time.

Moving to the second variable, we have SPED "Orient to Objects"--he was oriented toward objects 40.6% of the time. Again, there was an interval where he was not oriented to objects at all--0%; and there was another interval where he was oriented 100% of the time to objects. This does not mean that he never looked away from the objects, but it means that each of the twenty intervals, in each of the fifty-two observation sessions, he looked at the objects at least briefly. Continuing, he was "Oriented Away" 61% of the time and he was "Oriented into Space" or non-focused about .2% of the time, and had "Neutral Affect" about 8% of the time, "Postive Affect" about 12%, "Negative Affect" .6%, and " Distress" was displayed a little over 1% of the time.

To summarize for SPED 11, he was "Oriented Away" about 61% of the time, looking at objects a bit less than 40%, and paying attention to the peer or nonhandicapped about 11% of the time. Turning to his affect it is primarily neutral, with only about 12% of the time positive affect shown. For position, he is characterized as "Active Reclining" about 81% of the time. For touch, about 47% of the time there is no touch occurring. "Accidental Touch" occurs about 36% of the time, with "Touch Play, Maintain Contact" about 14% of the time. "Negative Touch" behaviors occur very infrequently--less than 1% of the time. Turning to objects, about 25% of the time there were no objects present. About 23% of the time objects are present but they are not touched. 39% of the time objects are touched, and objects are reached for about 15% of the time. Less than 1% of the time does the SPED offer an object and objects are offered and accepted about 6% of the time. Turning to play behavior, 43% of the time play behavior of SPED 11 is deemed appropriate. Breaking this down, 22% of the time "Parallel Play" is occurring; 20% of the time play is cooperative. "Interactive Play" with SPED 11 never occurred. Vocalizations were infrequent for this child. 66% of the time there were no vocalizations. When they did occur, 25% of the time they were for "Non-directed, Non-language" sounds. Less than 6% of the time were vocalizations directed and identifiable.

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*Chassan, J.B. Research design in clinical psychology and psychiatry. (2nd Edition) Halsted Press: NY, 1979, pg. 317-318.

Turning to SPED 23, also described in Table 1, we find a somewhat similar pattern for orientation, with 54% of the time the SPED is "Oriented to Objects" and 55% of the time he is "Oriented Away", while only 9% of the time he is "Oriented to the Non". Similarly, affect for SPED 23, was neutral about 95% of the time, 4% positive and about 1% of the time is he negative. Similarly, for position "Active Reclining", 94% of the time. For SPED 23, we see considerably more purposeful movement--54% of the time versus 11% for SPED 11. With SPED 23 we see even more "Accidental Touch" at an almost similar level of "No Touch" occurring--32% of the time. "Play, Maintain Contact" occurred almost 18% of the time for SPED 23. Objects were not present less than 10% of the time versus 25% for SPED 11. Still when objects were present, 23% of the time there was no touching of the objects. Reaching occurred approximately as often for both SPED 11 and SPED 23--16% for SPED 23. Offering is not occurring as it was with SPED 11, but we do find some accepting of objects by SPED 23--almost 6% of the time there was some acceptance of objects during intervals. Turning to play behaviors, 29% of the time behaviors were seen as appropriate play for SPED 23, contrasted with 43% of the time for SPED 11. "Parallel" and "Cooperative Play" occurred about equally often for SPED 23--around 14%, and "Interactive Play" never occurred for SPED 23 as it never occurred for SPED 11. Turning to vocalizations, again we have a high percentage of the time where no vocalizations are occurring--62% for SPED 23, 66% for SPED 11. When the vocalizations do occur they are primarily on nonlanguage sounds--37% of the time. No other type of vocalization occurred more than 1% of the time for SPED 23. This is very similar with SPED 11.

Turning to SPED 26, we can see again many similarities. The orientation is primarily away--59% of the time. Objects 42% of the time, with "Orient to Non" about 12%. Affect is neutral about 89% of the time, positive about 10% of the time, and negative about 1% of the time. For position, there is a little bit more variability for this SPED. 43% of the time we find "Passive Recline" or sitting--that's the child not even holding himself up. "Active Recline", about 55% of the time. That's the one which is the most frequent with the other children. "Passive Movement" occurs about 14% of the time. Turning to touch, we have 38% of the time no touch occurring. We also have over 50% if the time "Accidental Touch" happening, with very little "Negative Touch" behavior going on--less than 1% of the time. Objects are usually present. Only 14% of the time they were not. Objects were touched about 25% of the time. Turning to play, behavior is labeled as appropriate about 18% of the time. None of the behavior is labeled as inappropriate play. Thus much of the behavior was not labeled play at all. Of that 18%, 10% is parallel and about 6% occur is cooperative. "Interactive Play" does not occur as it did not occur in the previous two children. Vocalizations are rarely present in this child. 88% of the time there were no vocalizations whatsoever, and 11% of the time the vocalizations were merely "Nonlanguage Sounds".

Turning to SPED 30, we see again a somewhat similar pattern, but with some important differences. Orientation is primarily to objects 76% of the time; looking away is less than 11% of the time which is in considerable contrast to the other children who are often times looking away. Affect is neutral about 67% of the time, and is positive about 46% of the time. This is a considerable increase over the other children mentioned previously. 99% of the time this child is reclining passively. Touch is rarely occurring--69% of the time there is no touch and when there is, it is accidental touch, occurring about 17% of the time, or touching play to maintain contact about 15% of the time. Objects are usually present for this child, and only 1% of the time there are no objects. However, 17% of the time even though there are objects present, they are not touched. 57% of the time the child reaches for objects within the interval. Turning to play, we see a considerable amount of "Appropriate Play"--56% of the time, with no "Inappropriate Play". "Parallel Play" about 4%, and "Cooperative Play" occurring 23% of the time and "Interactive Play" 7% of the time. No other child previously mentioned has shown any interaction play, so this is a considerable increase. Vocalizations are again often times not present--65% of the time, but there are a considerable percentage of "Directed Vocalization"--16% and 21% of the intervals there is some laughter occurring, again a very different pattern from the previous children.

Turning to SPED 50, we find again a primary orientation to objects 70% of the time, with considerable orientation away 43% of the time, and orientation to non about less than 6% of the time. The affect is neutral about 97% of the time and positive about 39% of the time. Position is active reclining 99% of the time. We see nonpurposeful movement about 16% of the time, and purposeful movement only 7% of the time. 86% of the time there is "No Touch" occurring and "Accidental Touch" occurring about 8% of the time and other types of touch occurring rather infrequently. Objects are usually present for this child only 14% of the time are there none. 17% of the objects are present but not touched and 69% of the time objects are touched. In 29% of the intervals there is some reaching for objects but very little acceptance of objects, approximately 1%. Play is labeled appropriate for SPED 50 about 46% of the time, this broken down into "Parallel Play" about 21%, "Cooperative Play"--18% and "Interactive Play" .0%. Vocalizations are rarely present, 80% of the time there are no sounds and about 10% of the time vocalizations are "Nonlanguage Sounds", with 8% of the time they are "Directed Vocalizations".

Turning to the final SPED in this table, SPED 69, we find some interesting differences. 62% of the time SPED 69 is oriented unfocused off into space, with 18% oriented away on some fixed object and 20% of the time he is oriented to the object and 4% of the time oriented to the non. Affect is neutral 87% of the time, with very little positive or negative--3% for each of those, and 13% distress responses. SPED 69 is virtually always reclining passively with some nonpurposeful movement. No touch occurs 53% of the time, "Accidental Touch" about 15% and "Play: Maintain Contact", this is play behavior in which physical contact is maintained for 3 seconds or more, occurs 36% of the time (36% of the intervals in which we observed this child, there is this play maintain contact type of behavior). Objects are virtually always present, although 49% of the time there is no contact with the objects that are virtually always present. There is considerable reaching--17% of the time and acceptance is also occurring a good deal of the time, about 15%. 40% of the behavior is appropriate, this breaks down to less than 1% parallel, about is cooperative and 3% is interactive. Again, vocalizations usually don't occur, 68% of the time there were no vocalizations and of these 21% were nonlanguage sounds, 7% were whines or whimpers.

To summarize Table 2, which has displayed mean levels and variabilities of behaviors for special education children, in general we see a situation where SPEDS are oriented away or possibly oriented to objects. In one case, the SPED is always oriented off into space in a nondirected fashion. Usually, we see a neutral affect but with considerable positive affect occurring and lesser levels of negative affect. Positioning is often times reclining, sometimes it's inactive and sometimes it's completely passive. We see a tremendous amount of "Accidental Touch"; it seems whoever interacts with the SPED is in there close enough that there is a lot of touching going on, although, of course, there are many intervals where no touch at all occurs--approximately half the time there will be no touching and a good majority of the touching is of accidental nature, or some playing or maintaining contact for 3 or more seconds. Objects are oftentimes present. For some of the children they are virtually always present, but there is a good percentage of the time where these objects are present and not touched. We see considerable reaching behavior--15-20% or so, but considerable less acceptance of objects. Playing is oftentimes appropriate, maybe 40% of so, with the proponderate amount of play being parallel or cooperative. This varies a bit from child to child. We see virtually no interactive play with these children. Vocalizations are generally not present, maybe 65 to 75% of the time there's no vocalizations at all during a ten second interval. When vocalizations do occur, they are usually nonlanguage sounds, with maybe 5-6% of the time some sort of directed vocalization that is interpretable. The SIOS rating then gives a good overview of the sort of average level of SPEDS being observed. They are typically not able to move around very much and are essentially nonverbal. Interactions are characterized by considerable touch and interaction with a fair amount of positive affect occurring, although, of course, a majority of the time the affect is neutral.

Correlations: Background with SPED

Table 3 correlates eye level with SPED behaviors. It is hypothesized that if the non is at the same eye level as the SPED this will be conducive to various behaviors of the SPED; whereas, if the non is at a level higher than the SPED other kinds of behaviors will be encouraged or impossible. In Table 3, only significant correlations are displayed to two decimal places, with the decimal point itself omitted. Looking at Table 3, for SPED 11, "Orientation to the Non" is negatively correlated -.35 with the non being at the same level as the SPED. That is, if he or she is the same eye level, the SPED is less likely to look at the non.

This may seem to be a bit unusual, but I think with a little thought this might not seem so unreasonable. When the non is at a higher level than the SPED, typically, the SPED is on his back with his eyes looking up to the non. Further down the table, we see that the "Orientation to Objects" is positively correlated .32 with the SPED being at the same eye level as the non. Thus if the two of them are at the same level, they can both look at some objects or manipulate some objects. Continuing for SPED 11, we see more purposeful movement when eye level is equal. We also see more positive touch and we see more touching of objects. We see more appropriate play and considerable more parallel play. Turning to SPED 23, we see less orienting away when they are at the same eye level. Affect distress is increased; cooperative play is higher. Turning to SPED 26 we see considerable more accidental touch; we see less parallel play and we have a negative correlation for non vocalization, which means we have an increase in vocalization and these are nonlanguage sounds. For SPED 23 we see more orientation of objects again. We see less touch play maintain contact and more reaching for objects when they are at the same level. With SPED 50 we see less orientation to space; more purposeful movement, more play maintain contact and less likelihood of there being any objects present. SPED 69, we see more negative affect, more objects being touched, and less appropriate play when they are at the same eye level. With SPED 50 we see less orientation to space; more purposeful movement, more play maintain contact and less likelihood of there being any objects present. SPED 69, we see more negative affect, more objects being touched, and less appropriate play when they are at the same eye level. The findings for SPED 69 are interesting. For example, we find that being at the same eye level we have a negative correlation with appropriate play. In other words, when they are at the same eye level, we see less appropriate play. But if we look back to Table 2 with SPED 69, we find that his position is normally that of passive reclining. He is not holding himself up; his position in on his back, stomach or side. If someone were interacting with him and their eye level was above him, he would then probably be on his back and his arms would be able to move. However, if he were over on his side, then it would be possible for the eye level to be the same between the SPED and the non, but I think we would have a less likelihood of "Appropriate Play", because he would have more difficulty moving his arms. It would be interesting to investigate and see exactly what situation this SPED is in during most of these interactions. Thus eye level appears to be an important determinant of SPED behavior but it may be mediated through particular SPED characteristics.

SPED with NON

Turning to Table 4, we find correlations between affect of the non and behavior of the SPED. When the affect of the non is positive for SPED 11 we see more orientation to the non; we see much less neutral affect of the SPED. In other words, when the non is smiling, the SPED is more likely to be also. We see more touch; we see more spontaneous vocalizations, both nondirective and directive and we see an increase in laughter. All of these are significant correlations, because it appears that the affect of the non is important in affecting positive behaviors of the SPED. For SPED 23 we see a similar positive impact of affect of the non's affect to the SPED. He is less likely to orient away; he's more likely to have positive affect and more likely to have positive touch, more likely to accept objects, engage in cooperative play and producing vocalizations. If you will recall from Table 2, vocalizations were oftentimes not occurring. We find that affect of the non may very well have an impact on vocalizations on both SPED 11 and 23. For SPED 26 the impact of the non's affect is less compelling. We see more orientation to space and more acceptance of objects. These are the only two coefficients that were significant for SPED 26, suggesting less of an impact of the non's positive affect on SPED 26. For SPED 30 we have a considerable number of significant coefficients. He is less likely to be oriented away and he's more likely to have a positive affect, and he's more likely to touch the non, and he's less likely to be maintaining contact, less likely to be touching objects and more likely to be reaching for objects and less likely to be vocalizing, when the non's affect is positive. These findings are a little bit puzzling compared to previous SPEDS. From SPED 50 we see more attention seeking and touch and withdrawal and more reaching for objects. From SPED 69 we see more appropriate play, more cooperative play and less intrusions when the non's affect is positive. Thus positive affect of non appears to be a good indicator of a variety of positive SPED behaviors.

Table 5 displays similar correlations for the non behavior "Oriented to the SPED". For SPED 11, when the non is looking at the SPED, the SPED is more likely to be oriented to objects and less likely to be looking away. His affect is less likely to be neutral and he is less likely to be doing passive and nonpurposeful movements. When the non is looking at him, he is less likely to be touching the non, although accidental touches are increased. He is more likely to be reaching for objects and he is more likely to be vocalizing, both nonlanguage sounds and spontaneous nondirected vocalizations are increased. SPED 23, when the non is oriented toward SPED we see more orientation to objects, less distress affect, less passive movement, more accidental touch, less positive touch, more objects being reached for and less inappropriate play. For SPED 26, we see more touch, accidental and touch maintain contact in particular. It is less likely that objects will be present and if they are, they are less likely to be touched when the non is looking at the SPED. For SPED 30, we see an increase in orientation to the non. When the non looks at the SPED we see less touching and less touching of objects when they are present. In SPED 50, we see a decrease in an orientation to objects, and we see an increase in touch behaviors, we see less objects being offered by the SPED, we see less appropriate play, less parallel play and a decrease in vocalizations, except for repeating vocalizations which are increased. For SPED 69, when the non looks at the SPED, we find an increase in orientation to objects, increase in touching objects, decrease in reaching for objects and cooperative play. Thus, the orienting of the non to the SPED appears to have different effects upon different SPEDS.

Turning to Table 6, we have the correlations of SPED behaviors with the non when he is oriented to objects. In the previous table, the non was oriented to the SPED. In this table, the non is oriented to objects. There is less orientation away when the non is oriented to the object; there's less passive movement and more purposeful movement and more positive touch, more objects touched, considerably more appropriate and parallel play and cooperative play and less whimpering. Thus for SPED 11, the non orienting to objects appears to be a very positive strategy which results in a number of desirable SPED behaviors. For SPED 23, we have a similar effect of the non orienting to objects. The SPED is more likely to orient to the objects, less likely to orient away, less likely to have negative affect, less likely to have passive movement, more likely that touch will occur, especially touch maintain contact, more likely to touch objects and to play cooperatively. Moving on to SPED 26, we again see the very positive affect of the non orienting to the objects. When the non orients to the objects so does the SPED. He is more likely to touch and reach for the objects, play appropriately and play cooperatively. For SPED 30, we have fewer significant correlations, but those that are there also follow the general positive pattern for previous SPEDs, with SPEDs more likely to orient to the objects, less likely to be oriented into space and less likely to have a neutral affect. For SPED 50, again we have these positive SPED behaviors when non orients to objects. He is more likely to be oriented to objects, less likely to be oriented away, more likely to be actively reclining, and more likely to be reaching for objects. In SPED 69, there is only one significant correlation and it is a negative one. Where the non is oriented to objects, the SPED is less likely to touch the objects.

In summary in Table 6, we seem to see a dramatically positive affect of the non orienting to objects for all SPEDs, except SPED 69, there appears to be a very general pervasive positive effect upon the SPED when the non looks at the objects. This can be contrasting to the previous table where the non is looking at the SPED. The non's looking at the SPED appears to have mixed effects on the SPED. But when the non looks at the objects we have a general positive affect on the SPED behaviors. Making causal inferences from these results is a little difficult. All we have demonstrated is that there is a correlation at this point. Further research is needed.

List of Tables

TABLE # PAGE #

1. Sios Interrater Reliability....................................139
2. Mean Levels of SPED Behaviors..................................141
3. Eye Level Correlations...147
4. NON Affect Correlations..148
5. Orientation Correlations: NON Orient to SPED...................149
6. Orientation Correlations: NON Orient to Objects................151
7. Peer-Teacher Mean Percents for NON Behaviors...................152
8. Peer-Teacher Mean Percents for SPED Behaviors..................153
9. Correlation with Time: NON Behaviors for 6 SPEDS...............154
10. Correlation with Time: SPED Behaviors for 6 SPEDS.............155
11. Standard Deviation Differences for Peer-Teacher...............156
12. Peer-Teacher Mean Percents for Joint and Master Behaviors.....157
13. Correlations with Time: Joint and Master Behaviors............158

TABLE 1

SIOS Interrater Reliability for 649 Observation Intervals

		OBSERVER				
Variable	Neither	One	Two	Both	Phi	Kappa
NORSPE	110	23	21	495	.791	.791
NOROBJ	219	24	54	352	.753	.750
NORAWA	418	14	26	191	.860	.860
NAFNUE	87	3	15	544	.892	.890
NAFPOS	543	11	3	92	.918	.917
NAFNEG	649	0	0	0	.	.
NAFDIS	649	0	0	0	.	.
NPOCLO	24	1	4	620	.903	.902
NPOFAR	599	2	7	41	.895	.894
NPOFRO	300	2	6	341	.975	.975
NPOSID	390	4	6	249	.968	.968
NPOBEH	598	3	5	43	.908	.908
NPOMOV	530	6	11	102	.908	.907
NTONON	397	4	4	244	.974	.974
NTOACC	570	7	4	68	.916	.916
NTOATT	556	3	25	65	.809	.799
NTOCOM	643	0	0	6	1.000	1.000
NTOGUI	424	26	7	192	.886	.884
NTOPOS	612	1	3	33	.940	.940
NTONEG	649	0	0	0	.	.
NOBNON	541	0	1	107	.994	.994
NOBNOC	500	3	4	142	.969	.969
NOBDEM	362	10	3	274	.959	.959
NOBOFF	580	1	9	59	.916	.913
NOBACC	649	0	0	0	.	.
NOBADJ	593	4	0	52	.960	.960
NPLAPP	280	13	5	351	.944	.944
NPLINA	649	0	0	0	.	.
NPLPAR	454	1	4	190	.982	.982
NPLCOO	489	4	7	149	.953	.953
NPLINT	649	0	0	0	.	.
NVONON	555	2	2	90	.975	.975
NVOATT	635	2	3	9	.779	.779
NVOSPE	335	30	26	258	.825	.825
NVOAPP	506	12	17	114	.860	.859
NVODIS	645	0	1	3	.865	.856
NVOQUE	578	7	10	54	.850	.850
NVOADU	529	8	4	108	.936	.936
NVOPEE	619	2	10	18	.752	.741
NVOTAL	649	0	0	0	.	.
NVOOTH	648	0	1	0	.	.
NVOSIN	617	2	3	27	.911	.911
NVOLAU	639	0	2	8	.893	.887
NINTRU	646	0	0	3	1.000	1.000

TABLE 1
(cont.)

		OBSERVER				
Variable	Neither	One	Two	Both	Phi	Kappa
SORNON	420	19	17	193	.874	.874
SOROBJ	313	20	25	291	.861	.861
SORAWA	140	26	55	428	.694	.690
SORSPA	646	0	1	2	.816	.799
SAFNEU	60	4	6	579	.915	.915
SAFPOS	601	5	3	40	.903	.902
SAFNEG	627	1	1	20	.951	.951
SAFDIS	649	0	0	0	.	.
SPOREC	616	0	0	33	1.000	1.000
SPOACT	34	2	1	612	.955	.955
SPOPAS	629	1	0	19	.974	.974
SPONPU	622	6	2	19	.823	.820
SPOPUR	619	0	12	18	.767	.741
STONON	421	3	6	219	.969	.969
STOACC	531	7	8	103	.918	.918
STOATT	594	7	20	28	.662	.653
STOPOS	618	1	4	26	.910	.908
STOPLA	391	21	5	232	.916	.915
STONEG	647	0	0	2	1.000	1.000
STOWIT	649	0	0	0	.	.
SOBNON	545	0	11	93	.936	.934
SOBNOC	443	13	0	193	.954	.953
SOBTOU	607	0	20	22	.712	.673
SOBREA	366	21	0	262	.936	.934
SOBOFF	648	0	0	1	1.000	1.000
SOBACC	604	0	1	44	.988	.988
SPLAPP	334	5	2	308	.978	.978
SPLINA	643	0	0	6	1.000	1.000
SPLPAR	446	3	11	189	.949	.949
SPLCOO	528	9	3	109	.937	.937
SPLINT	649	0	0	0	.	.
SVONON	230	14	14	391	.908	.908
SVOSND	416	14	17	202	.893	.893
SVONDI	649	0	0	0	.	.
SVODIR	648	1	0	0	.	.
SVOREP	649	0	0	0	.	.
SVOHUM	464	0	0	3	1.000	1.000
SVOLAU	639	0	2	8	.893	.887
SVOWHI	634	0	0	15	1.000	1.000
SVOPRO	645	0	1	3	.865	.865

Table 2
(Job 569)

Correlations: Background with SPED Behaviors for selected SPEDS

SPED = 11 N = 52

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	11.5	22.6	0	100
SOROBJ	40.6	35.5	0	100
SORAWA	61.4	32.8	0	100
SORSPA	0.2	1.4	0	10
SAFNEU	86.9	16.6	20.0	100
SAFPOS	12.3	16.5	0	80
SAFNEG	0.6	2.4	0	10
SAFDIS	1.1	4.9	0	25
SPOREC	14.9	34.3	0	100
SPOACT	81.2	37.3	0	100
SPOPAS	16.7	36.0	0	100
SPONPU	1.3	2.5	0	10
SPOPUR	10.6	23.9	0	100
STONON	47.1	32.8	0	100
STOACC	36.3	28.6	0	100
STOATT	1.4	5.8	0	40
STOPOS	1.4	4.2	0	25
STOPLA	13.6	23.8	0	100
STONEG	0.3	1.5	0	10
STOWIT	0	0	0	0
SOBNON	25.2	37.3	0	100
SOBNOC	20.7	29.5	0	100
SOBTOU	39.4	37.8	0	100
SOBREA	15.0	26.7	0	100
SOBOFF	0.6	2.9	0	15
SOBACC	6.2	15.7	0	70
SPLAPP	43.1	39.2	0	100
SPLINA	0	0	0	0
SPLPAR	22.4	30.2	0	90
SPLCOC	20.1	30.6	0	100
SPLINT	0	0	0	0
SVONON	66.0	24.8	10	100
SVOSND	25.4	22.1	0	90
SVONDI	1.4	5.5	0	35
SVODIR	5.8	13.9	0	75
SVOREP	0.2	1.4	0	10
SVOHUM	0.6	3.0	0	20
SVOLAU	0.9	3.7	0	25
SVOWHI	0.5	1.5	0	5
SVOPRO	0.7	2.4	0	10
SINTRU	0.5	2.3	0	15

Table 2
(cont.)

SPED = 23 N = 55

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	8.8	10.2	0	35
SOROBJ	54.2	28.3	0	100
SORAWA	55.3	29.5	0	100
SORSPA	0.4	1.3	0	5
SAFNEU	94.8	10.4	45	100
SAFPOS	4.1	9.4	0	55
SAFNEG	1.2	5.4	0	30
SAFDIS	0.1	0.7	0	5
SPOREC	0.9	5.5	0	40
SPOACT	93.9	11.9	40	100
SPOPAS	0.7	3.3	0	22
SPONPU	4.6	7.8	0	40
SPOPUR	53.9	30.2	0	100
STONON	31.7	30.6	0	100
STOACC	46.5	29.7	0	100
STOATT	2.3	6.4	0	30
STOPOS	1.5	5.6	0	40
STOPLA	17.7	24.1	0	85
STONEG	0.3	1.2	0	5
STOWIT	0.5	1.7	0	10
SOBNON	9.9	19.2	0	100
SOBNOC	23.1	25.1	0	100
SOBTOU	48.8	30.1	0	100
SOBREA	16.2	24.7	0	80
SOBOFF	0.6	2.2	0	10
SOBACC	5.7	12.9	0	60
SPLAPP	29.2	28.4	0	90
SPLINA	0.5	1.7	0	10
SPLPAR	14.3	20.9	0	75
SPLCOC	12.8	19.7	0	85
SPLINT	0	0	0	0
SVONON	62.3	22.4	0	85
SVOSND	37.4	22.5	0	85
SVONDI	0.2	0.9	0	5
SVODIR	0.2	0.9	0	5
SVOREP	0	0	0	0
SVOHUM	0.1	0.7	0	5
SVOLAU	0.2	0.9	0	5
SVOWHI	0	0	0	0
SVOPRO	0.2	1.0	0	5
SINTRU	0.4	1.6	0	10

Table 2
(cont.)

SPED = 26 N=33

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	12.1	16.5	0	76
SOROBJ	42.1	32.6	0	100
SORAWA	59.1	30.5	0	100
SORSPA	7.3	15.7	0	55
SAFNEU	89.1	15.7	40	100
SAFPOS	9.7	15.2	0	60
SAFNEG	1.1	6.1	0	35
SAFDIS	0	0	0	0
SPOREC	43.1	33.4	0	100
SPOACT	55.4	34.5	0	100
SPOPAS	13.8	27.9	0	100
SPONPU	2.5	7.3	0	35
SPOPUR	7.4	13.5	0	55
STONON	37.9	27.0	5	100
STOACC	51.5	26.0	0	100
STOATT	1.7	5.6	0	30
STOPOS	0.5	1.5	0	5
STOPLA	8.9	18.1	0	80
STONEG	0.2	0.9	0	5
STOWIT	0.2	0.9	0	5
SOBNON	14.1	32.6	0	100
SOBNOC				
SOBTOU	25.1	22.7	0	70
SOBREA	2.7	6.2	0	23
SOBOFF	0.5	2.6	0	15
SOBACC	2.3	8.8	0	50
SPLAPP	17.9	29.3	0	100
SPLINA	0	0	0	0
SPLPAR	10.5	19.9	0	75
SPLCOC	5.6	18.8	0	100
SPLINT	0	0	0	0
SVONON	88.3	15.1	55	100
SVOSND	10.9	13.9	0	45
SVONDI	0	0	0	0
SVODIR	0.2	0.9	0	5
SVOREP	0	0	0	0
SVOHUM	0	0	0	0
SVOLAU	1.5	5.3	0	25
SVOWHI	0	0	0	0
SVOPRO	0	0	0	0
SINTRU	3.7	13.1	0	75

Table 2
(cont.)

SPED = 30 N= 28

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	13.6	15.7	0	54
SOROBJ	79.3	26.5	0	100
SORAWA	10.9	9.4	0	35
SORSPA	7.8	13.6	0	60
SAFNEU	67.8	29.4	0	100
SAFPOS	46.2	27.0	0	100
SAFNEG	0	0	0	0
SAFDIS	0	0	0	0
SPOREC	98.9	3.3	90	100
SPOACT	0	0	0	0
SPOPAS	0	0	0	0
SPONUP	0.2	1.0	0	5
SPOPUR	0	0	0	0
STONON	68.5	34.9	0	100
STOACC	16.8	24.5	0	85
STOATT	0	0	0	0
STOPOS	0	0	0	0
STOPLA	14.6	27.9	0	100
STONEG	0	0	0	0
STOWIT	0	0	0	0
SOBNON	1.1	3.1	0	10
SOBNOC	17.2	15.5	0	54
SOBTOU	20.4	31.3	0	100
SOBREA	56.6	35.4	0	100
SOBOFF	0	0	0	0
SOBACC	0.5	2.7	0	14
SPLAPP	56.1	44.0	0	100
SPLINA	0	0	0	0
SPLPAR	4.0	15.7	0	80
SPLCOC	22.6	36.7	0	100
SPLINT	6.6	18.0	0	80
SVONON	65.3	23.3	0	93
SVOSND	0	0	0	0
SVONDI	0.8	2.8	0	11
SVODIR	16.5	13.6	0	50
SVOREP	0	0	0	0
SVOHUM	0	0	0	0
SVOLAU	20.6	29.5	0	100
SVOWHI	0	0	0	0
SVOPRO	0	0	0	0
SINTRU	2.5	6.3	0	26

Table 2
(cont.)

SPED = 50 N = 22

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	5.8	6.4	0	20
SOROBJ	70.5	16.6	16	95
SORAWA	42.9	17.0	20	83
SORSPA	0.9	1.9	0	5
SAFNEU	96.6	7.0	75	100
SAFPOS	38.6	16.3	15	65
SAFNEG	0.9	3.3	0	15
SAFDIS	0.2	1.1	0	5
SPOREC	0	0	0	0
SPOACT	99.8	1.1	95	100
SPOPAS	0	0	0	0
SPONPU	16.3	13.8	0	45
SPOPUR	7.4	7.2	0	25
STONON	85.7	13.8	41	100
STOACC	7.9	7.5	0	30
STOATT	0.2	1.1	0	5
STOPOS	2.3	10.7	0	50
STOPLA	3.4	5.4	0	20
STONEG	0	0	0	0
STOWIT	0.5	2.1	0	10
SOBNON	13.6	11.1	0	40
SOBNOC	16.8	14.1	0	50
SOBTOU	69.4	16.7	41	95
SOBREA	28.6	16.2	0	55
SOBOFF	3.0	4.5	0	15
SOBACC	1.0	3.5	0	16
SPLAPP	45.6	21.3	10	90
SPLINA	0	0	0	0
SPLPAR	21.1	21.0	0	80
SPLCOC	18.0	20.2	0	80
SPLINT	0.4	1.8	0	8
SVONON	80.0	15.2	40	100
SVOSND	10.0	14.6	0	60
SVONDI	0	0	0	0
SVODIR	8.4	6.6	0	20
SVOREP	0.5	2.1	0	10
SVOHUM	0	0	0	0
SVOLAU	1.1	5.3	0	25
SVOWHI	0	0	0	0
SVOPRO	0	0	0	0
SINTRU	11.1	20.9	0	100

Table 2
(cont.)

SPED = 69 N = 16

VARIABLE	MEAN	STD DEV	MINIMUM	MAXIMUM
SORNON	4.4	9.2	0	33
SOROBJ	19.9	22.9	0	60
SORAWA	18.3	19.8	0	62
SORSPA	62.1	29.6	0	100
SORNEU	87.3	17.1	35	100
SAFPOS	3.0	7.3	0	26
SAFNEG	3.3	6.4	0	20
SAFDIS	13.1	18.3	0	62
SPOREC	99.0	3.9	85	100
SPOACT	0	0	0	0
SPOPAS	0	0	0	0
SPONPU	10.8	16.0	0	50
SPOPUR	0.3	1.4	0	6
STONON	52.7	25.5	6	100
STOACC	15.4	15.6	0	50
STOATT	0	0	0	0
STOPOS	0	0	0	0
STOPLA	35.7	35.8	0	100
STONEG	0	0	0	0
STOWIT	0	0	0	0
SOBNON	2.6	10.3	0	41
SOBNOC	48.6	25.0	7	86
SOBTOU	17.9	26.9	0	85
SOBREA	17.3	27.9	0	81
SOBOFF	0	0	0	0
SOBACC	15.5	16.8	0	50
SPLAPP	39.9	38.9	0	100
SPLINA	1.9	5.3	0	18
SPLPAR	1.2	2.7	0	9
SPLCOC	29.8	38.1	0	100
SPLINT	3.1	10.1	0	40
SVONON	68.2	22.0	37	100
SVOSND	21.0	22.7	0	68
SVONDI	1.8	7.3	0	29
SVODIR	0	0	0	0
SVOREP	0	0	0	0
SVOHUM	0	0	0	0
SVOLAU	0.4	1.7	0	7
SVOWHI	7.6	12.8	0	35
SVOPRO	0.8	2.2	0	7
SINTRU	4.4	5.4	0	14

Table 3
(Job 569)

EYE LEVEL CORRELATIONS: SAME EYE LEVEL IS CONDUCIVE TO
(For SPED's 11, 39, 69 teacher was significantly more often at same eye level than were peers. There were no such differences for SPED's 23, 26 or 50)

SPED 11	COEF	DESCRIPTION OF VARIABLE
SORNON	-35	Orient to non
SOROBS	32	Orient to objects
SPOACT	31	Active recline
SPOPAS	-39	Passive movement
SPOPUR	35	Purposeful movement
STONON	-29	Touch person none
STOPAS	29	Touch person positive
SOBNON	-47	Objects none
SOBEOU	34	Touches object
SPLAPP	31	Play appropriate
SPLPAR	42	Play parallel

SPED 23	COEF	DESCRIPTION OF VARIABLE
SORAWA	-27	Orient away
SAFBIF	27	Affect distress
SPLCOO	42	Play cooperative
SINTRU	31	Improvements

SPED 26	COEF	DESCRIPTION OF VARIABLES
STONON	-37	No touch
STOACC	61	Touch accidentally
SPLPAR	-35	
SPONON	-43	No vocalization
SPOSND	44	Nonlanguage sounds

SPED 30	COEF	DESCRIPTION OF VARIABLES
SOROBJ	43	Orient to objects
STONON	56	Touch none
STOPLA	-52	Touch play, maintain contact
SOBREA	42	Objects reaches

SPED 50	COEF	DESCRIPTION OF VARIABLES
SORSPA	-47	Non orientation
SPOPUR	50	Purposeful movement
STOPLA	47	Touch play, maintain contact
SOBNON	47	Objects none

SPED 69	COEF	DESCRIPTION OF VARIABLES
SAFNEG	49	Affect negative
SOBTOU	49	Objects touches
SPLAPP	-53	Play appropriate
SINTRU	62	Intrusion

Table 4
(Job 596)

NON AFFECT CORRELATIONS: POSITIVE AFFECT OF NON

SPED 11	COEF	DESCRIPTION OF VARIABLE
SORNON	36	Orient to non
SAFNEU	-66	Affect neutral
SAFPOS	73	Affect positive
STONON	-27	Touch none
SVONON		Vocalization none
SPONDI	55	Spontaneous vocalizations nondirective
SPODIR	37	Vocalizations spontaneous directive
SPOLAU	35	Vocalizations laughing

SPED 23	COEF	DESCRIPTION OF VARIABLE
SORAWA	-33	Orient away
SAFNEU	-42	Affect neutral
SAFPOS	42	Affect positive
SPOREC	32	Position passive recline
SPOPUR	29	Purposeful movement
STOPOS	45	Touch positive
SOBACC	34	Objects accepts
SPLCOO	30	Cooperative play
SVONDI	38	Vocalizations nondirected
SVOLAU	26	Vocalizations laughter

SPED 26	COEF	DESCRIPTION OF VARIABLE
SORSPA	35	Orient to space
SOBACC	40	Objects accepts

SPED 30	COEF	DESCRIPTION OF VARIABLE
SORAWA	-40	Orient away
SAFNEU	-71	Affect neutral
SAFPOS	65	Affect positive
STONON	52	Touch none
STOPLA	-52	Touch play, maintain contact
SOBTOU	-43	Touch objects
SOBREA	52	Objects reaches
SVONON	-45	Vocalizations none
SINTRU	-43	Intrusion

SPED 50	COEF	DESCRIPTION OF VARIABLE
STOATT	41	Touch attention seeking
STOWIT	41	Touch withdrawal
SOBREA	46	Objects reaches

SPED 69	COEF	DESCRIPTION OF VARIABLE
SPLAPP	58	Play appropriate
SPLCOO	68	Play cooperative
SINTRU	-50	Intrusions

Table 5
(Job 596)

ORIENTATION CORRELATIONS: NON ORIENT TO SPED

SPED 11	COEF	DESCRIPTION OF VARIABLE
SOROBJ	28	Orient to objects
SORAWA	-28	Orient away
SAFNEU	-37	Affect neutral
SAFPOS	31	Affect positive
SPOPAS	-40	Position passive movement
SPONPU	-29	Position non-purposeful movement
STONON	-53	Touch none
STOACC	39	Touch accidental neutral
SOBNON	-46	Objects none
SOBREA	29	Objects reaches
SVONON	-38	Vocalizations non
SVOSND	30	Vocalizations nonlanguage sounds
SVONDI	27	Vocalizations spontaneous nondirected

SPED 23	COEF	DESCRIPTION OF VARIABLE
SOROBJ	26	Orient to objects
SAFDIS	-29	Affect distress
SPOPAS	-39	Passive movement
STONON	-45	Touch none
STOACC	43	Touch accidental
STOPOS	-30	Touch positive
SOBREA	28	Objects reaches
SPLINA	-35	Play inappropriate

SPED 26	COEF	DESCRIPTION OF VARIABLE
STONON	-71	Touch none
STOACC	51	Touch accidental
STOPLA	35	Touch play, maintain contact
SOBNON	-58	Objects none
SOBNOC	43	Objects no contact
SINTRU	-42	Intrusion

SPED 30	COEF	DESCRIPTION OF VARIABLE
SORNON	40	Orient to non
STONON	48	Touch none
STOPLA	-43	Touch play, maintain contact
SOBNOC	45	Objects no contact

Table 5
(cont.)

SPED 50	COEF	DESCRIPTION OF VARIABLE
SOROBJ	-42	Orient to objects
STONON	-43	Touch none
SOBOFF	-44	Objects offers
SPLAPP	-45	Play appropriate
SPLPAR	-42	Play parallel
SVONON	59	Vocalizations none
SVOSND	-61	Vocalizations nonlanguage sounds
SVOREP	51	Vocalizations repeats
SINTRU	51	Intrusion

SPED 69	COEF	DESCRIPTION OF VARIABLE
SOROBJ	61	Orient to objects
SOBTOU	52	Objects touches
SOBREA	-51	Objects reaches
SPLCOO	-60	Play cooperative

Table 6

ORIENTATION CORRELATIONS: NON ORIENT TO OBJECTS

SPED 11	COEF	DESCRIPTION OF VARIABLE
SOROBJ	63	Orient to objects
SORAWA	-46	Orient away
SPOPAS	-46	Position passive movement
SPOPUR	39	Position purposeful movement
STOPOS	30	Touch positive
SOBNON	-53	Objects none
SOBTOU	62	Objects touches
SPLAPP	70	Play appropriate
SPLPAR	31	Play parallel
SPLCOO	57	Play cooperative
SPOWHI	-36	Whimpers, cries

SPED 23	COEF	DESCRIPTION OF VARIABLE
SOROBJ	67	Orient to objects
SORAWA	-40	Orient away
SAFNEG	-30	Affect negative
SPOPAS	-27	Position passive movement
STONON	-44	Touch none
STOPLA	34	Touch play, maintain contact
SOBNON	-32	Objects none
SOBTOU	38	Objects touches
SOBACC	44	Objects accepts
SPLCOO	41	Play cooperative

SPED 26	COEF	DESCRIPTION OF VARIABLE
SOROBJ	46	Orient to objects
SPOPAS	-35	Position passive movement
SOBTOU	42	Objects touches
SOBREA	35	Objects reaches
SPLAPP	49	Play appropriate
SPLCOO	47	Play cooperative

SPED 30	COEF	DESCRIPTION OF VARIABLE
SORNON	-69	Orient to non
SOROBJ	51	Orient to objects
SORSPA	-41	Orient to space
SAFNEU	-51	Affect neutral

SPED 50	COEF	DESCRIPTION OF VARIABLE
SOROBJ	68	Orient to objects
SORAWA	-56	Orient away
SPOACT	42	Position active recline
SOBNON	-43	Objects none
SOBREA	54	Objects touches

SPED 69	COEF	DESCRIPTION OF VARIABLE
SOBTOU	-66	Objects touches

Table 7

Peer-Teacher Mean Percents for NON Behaviors for 6 SPEDS

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
NORSPE	61	88	75	82	52	83	80	83	56	81	25	71
NOROBJ	25	37	69	55	27	60	42	33	54	35	74	34
NORAWA	41	18	34	30	43	17	43	29	35	27	21	36
NAFNEU	91	86	91	83	92	91	88	86	86	83	77	89
NAFPOS	10	14	9	16	9	9	12	14	14	18	34	25
NAFNEG	0	0	0	0	0	0	0	0	0	0	0	1
NAFDIS	0	0	0	0	0	0	0	0	0	0	0	0
NPOCLO	91	96	94	96	82	95	95	92	91	92	80	88
NPOFAR	9	6	16	5	21	4	6	11	9	9	20	12
NPOFRO	29	59	24	40	33	56	26	51	40	48	11	2
NPOSID	27	11	69	50	36	24	50	30	38	33	67	85
NPOBEH	37	26	4	6	17	17	20	14	17	11	5	2
NPOMOV	42	21	24	22	40	29	28	23	21	21	9	6
NTONON	67	28	72	50	74	28	55	32	66	30	49	29
NTOACC	18	18	9	11	17	19	9	10	13	11	5	4
NTOATT	4	5	11	11	1	7	10	8	8	6	0	5
NTOCOM	4	3	2	0	1	0	1	1	0	1	1	0
NTOGUI	6	46	5	24	13	40	16	46	10	51	43	64
NTOPOS	0	1	1	3	0	5	9	3	1	2	1	3
NTONEG	0	0	0	0	0	1	0	0	0	0	0	0
NOBNON	48	24	0	16	8	7	29	22	18	11	3	2
NOBNOC	15	18	49	35	50	22	27	26	19	41	16	27
NOBDEM	28	30	45	40	28	45	41	27	53	32	22	10
NOBOFF	5	13	0	6	4	7	6	17	8	8	2	24
NOBACC	1	2	0	0	0	3	0	0	0	1	0	0
NOBADJ	4	14	6	4	9	18	4	8	2	10	57	51
NPLAPP	31	42	50	43	36	47	39	35	62	29	76	42
NPLINA	0	0	0	0	1	0	0	0	0	0	1	0
NPLPAR	12	12	34	19	27	20	15	17	48	17	26	0
NPLCOO	19	30	16	23	7	27	25	17	14	12	43	6
NPLINT	0	0	0	0	0	0	0	0	0	0	2	2
NVONON	32	8	28	11	49	11	29	16	41	16	41	32
NVOATT	14	13	4	7	27	16	9	12	8	14	2	19
NVOSPE	31	50	41	47	16	43	36	38	35	35	25	11
NVOAPP	8	24	11	20	1	22	7	18	3	21	3	27
NVODIS	0	1	0	1	0	2	0	1	0	0	0	0
NVOQUE	11	20	7	11	6	6	6	8	4	6	0	1
NVOADU	6	6	13	16	5	4	16	22	11	17	14	19
NVOPEE	7	2	7	0	4	1	8	1	1	1	19	2
NVOTAL	0	0	0	0	0	0	0	0	0	0	2	0
NVOOTH	0	0	0	0	0	0	0	0	0	0	0	0
NVOSIN	3	1	1	4	0	5	0	1	3	3	0	0
NVOLAU	0	0	5	2	0	0	1	0	2	0	1	0
SAMPLE n	22	39	14	19	14	53	18	45	17	37	15	9

note : significant p>.05 differences underlined

Table 8

Peer-Teacher Mean Percents for SPED Behaviors for 6 SPEDS

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
SORNON	16	12	35	23	8	14	20	36	19	13	6	4
SOROBJ	20	44	68	62	23	64	36	27	45	49	24	42
SORAWA	79	66	60	47	77	56	75	71	59	60	18	22
SORSPA	0	0	0	0	0	0	1	2	8	4	55	43
SAFNEU	93	83	84	85	88	91	92	87	90	90	88	90
SAFPOS	7	16	14	12	7	5	7	4	10	9	4	1
SAFNEG	0	1	1	3	5	4	2	6	0	1	1	4
SAFDIS	0	1	0	1	0	0	1	3	0	0	12	12
SPOREC	28	3	0	1	3	0	19	8	31	19	98	99
SPOACT	62	97	99	99	94	97	81	91	60	83	0	0
SPOPAS	35	6	1	3	2	0	17	10	16	6	0	0
SPONPU	1	2	4	1	8	4	0	3	4	2	6	12
SPOPUR	9	13	6	19	42	36	4	2	2	7	0	1
STONON	73	29	70	56	73	30	54	34	70	32	59	47
STOACC	19	28	14	8	18	33	15	22	20	33	9	24
STOATT	1	8	6	12	1	6	8	6	5	6	0	0
STOPOS	1	2	3	3	0	5	9	4	2	1	0	0
STOPLA	5	32	6	22	6	24	14	35	2	27	36	26
STONEG	0	0	0	0	0	2	0	0	0	0	0	0
STOWIT	0	0	0	0	1	0	0	0	0	0	0	0
SOBNON	49	23	0	13	8	7	31	23	18	14	3	0
SOBNOC	22	21	31	30	45	23	42	37	58	46	54	36
SOBTOU	22	27	2	10	37	32	10	15	12	18	6	29
SOBREA	13	24	67	47	10	36	21	11	13	16	31	15
SOBOFF	1	0	0	0	0	1	0	0	0	0	0	0
SOBACC	0	7	0	1	0	4	0	14	0	6	[illegible]	28
SPLAPP	29	47	67	52	33	41	33	27	24	22	59	24
SPLINA	0	0	0	0	0	4	0	0	0	0	2	0
SPLPAR	11	23	56	32	24	24	8	14	14	12	17	1
SPLCOO	17	22	11	20	9	16	23	13	10	9	42	8
SPLINT	0	0	0	0	0	0	0	0	0	0	1	4
SVONON	72	58	55	66	72	58	73	63	88	82	68	62
SVOSND	20	26	38	29	27	40	24	28	11	17	19	28
SVONDI	0	2	0	0	0	0	0	0	0	0	5	3
SVODIR	6	12	0	2	0	0	0	0	0	0	0	0
SVOREP	0	1	0	0	0	0	0	0	0	0	0	0
SVOHUM	1	0	0	0	0	0	0	0	0	0	0	0
SVOLAU	0	2	6	2	0	0	1	0	3	1	0	1
SVOWHI	1	0	1	2	0	0	3	8	0	0	4	8
SVOPRO	0	1	0	2	0	3	0	0	0	0	0	1
SAMPLE n	22	39	14	19	14	53	18	45	17	37	15	9

note: significant p<.05 differences underlined

Table 9

Correlation with Time: NON Behaviors for 6 SPEDS

	Peer with SPED #						Teacher with SPED #					
Behavior	11	18	23	25	26	69	11	18	23	25	26	69
NORSPE	-1	-3	+1	0	0	+4	+5	0	0	-1	-1	-6
NOROBJ	0	+3	+5	-2	+8	+4	+2	+1	+4	+4	+4	+1
NORAWA	0	-5	-4	+3	-5	-5	+3	+3	+5	+3	+2	+6
NAFNEU	+5	-1	+2	+3	+1	0	+1	+1	+1	+4	+3	-3
NAFPOS	-6	+2	-2	-3	-1	0	-2	+1	-1	-4	-3	+2
NAFNEG	0	0	0	0	0	0	0	0	0	+1	0	0
NAFDIS	0	0	0	0	0	0	0	0	0	0	0	0
NPOCLO	0	-2	+2	-3	+3	+4	-3	-1	+1	-1	0	-9
NPOFAR	+1	+1	-1	+4	0	-4	+4	+4	+2	+3	0	+9
NPOFRO	0	+2	+2	-6	+6	-4	-2	-3	+8	0	+2	-3
NPOSID	-1	-3	0	+4	-2	+6	+1	+3	-4	-2	0	-9
NPOBEH	-1	-2	-2	+2	-6	+2	+1	+2	-7	+3	-3	-1
NPOMOV	+1	0	-3	+3	-5	-1	0	+1	-7	+2	-3	+1
NTONON	-1	0	+1	-3	+1	+1	+1	+1	+7	-2	+3	+6
NTOACC	0	+3	-2	-2	-3	-3	-5	+2	-4	-3	-4	-1
NTOATT	-3	-3	+7	+1	+3	0	+3	+1	+5	+3	+2	-1
NTOCOM	-3	-4	0	+2	-2	-3	-3	+2	-2	-3	-3	0
NTOGUI	+6	+3	-1	+2	-1	+1	+2	-2	-6	+2	-3	-4
NTOPOS	+2	-3	0	+2	+5	-4	-1	+2	+6	+2	+2	-6
NTONEG	0	0	0	0	0	0	0	+2	-1	0	0	0
NOBNON	-1	0	-1	+3	-5	-3	+4	0	-3	+2	+3	+9
NOBNOC	-1	-3	-3	+2	-1	-3	-2	+3	+4	0	-4	+3
NOBDEM	-1	+4	+5	-5	+7	0	-1	+1	+3	-4	+4	-2
NOBOFF	+2	0	0	-5	-1	-2	-1	-6	-3	+3	-1	-4
NOBACC	+5	0	0	0	0	0	-2	0	-2	-1	0	0
NOBADJ	+5	0	-1	-5	-1	+2	-2	-2	-3	-2	-3	0
NPLAPP	0	+3	+4	-4	+6	+5	0	+1	+6	+5	+6	-5
NPLINA	0	0	0	0	0	0	0	0	-1	0	0	0
NPLPAR	0	+4	+5	+2	+7	+5	+1	+5	+7	+3	+5	0
NPLCOO	+1	-1	-1	-5	-1	+1	0	-2	0	+3	+3	-3
NPLINT	0	0	0	0	0	-3	0	0	0	0	0	-3
NVONON	-1	+2	0	-4	-6	-6	-3	+1	+1	-4	+1	-6
NVOATT	-3	+3	-3	0	+1	-4	-6	0	-5	-6	-5	-5
NVOSPE	0	+1	+6	+1	+6	+4	+6	+2	+4	+6	+5	0
NVOAPP	-2	-2	-1	+3	0	+1	0	-5	0	-2	-5	-1
NVODIS	+4	0	0	0	-3	0	-3	-2	-2	-1	-2	0
NVOQUE	+4	-1	-2	-1	+5	0	+5	+2	+6	+2	+4	-2
NVOADU	0	-2	-1	0	+5	0	+2	+4	+3	+5	+1	+9
NVOPEE	-1	-2	+1	+6	+3	-1	-2	+2	+1	+1	0	-1
NVOTAL	0	0	0	0	-2	+2	-2	0	0	0	-2	0
NVOOTH	0	0	0	0	0	0	0	0	0	-2	0	0
NVOSIN	+1	-1	0	+1	-3	0	-1	+1	+4	+2	+4	0
NVOLAU	+4	-4	+1	+3	-2	+3	+1	+1	+2	+1	+1	0
SAMPLE n	22	14	13	18	17	14	39	19	52	44	37	8
SIG COR>	42	53	55	47	48	53	32	46	27	30	32	71

note: correlations rounded to one decimal place and multiplied by ten

Table 10

Correlations with Time: SPED Behaviors for 6 SPEDS

	Peer with SPED #						Teacher with SPED #					
Behavior	11	18	23	25	26	69	11	18	23	25	26	69
SORNON	0	-3	-1	-3	-1	+2	+1	0	+3	+3	+2	-2
SOROBJ	+2	-3	+6	-2	+6	+7	-2	-1	0	-4	+1	+6
SORAWA	-2	+1	-5	+6	+1	+1	+5	+3	+3	+4	0	+7
SORSPA	-3	0	+1	-5	-4	-6	0	-5	0	-4	-3	-5
SAFNEU	+3	+1	+2	+5	+1	+3	0	+1	-4	+1	0	-1
SAFPOS	-3	0	-1	-5	-1	-4	0	-2	0	-3	0	-1
SAFNEG	0	-1	-1	+2	0	-3	-2	+2	+5	+1	-1	-3
SAFDIS	-3	0	0	-4	0	-1	-1	0	+1	-2	0	+2
SPOREC	0	0	-1	-8	-6	+4	-2	-6	0	-1	-7	0
SPOACT	0	+3	+1	+8	+8	0	+2	+6	+4	+1	+7	0
SPOPAS	-1	-3	-1	+1	-5	0	0	-2	0	+2	-2	0
SPONPU	-1	-4	-1	+1	-2	-4	+2	+1	0	-1	0	-4
SPOPUR	0	+3	-2	+1	-1	0	0	-3	-7	-3	-3	-3
STONON	-3	+1	0	-4	+1	-1	0	-1	+3	-2	+2	+4
STOACC	-2	-2	-1	-4	-6	-5	-7	-4	-7	-7	-8	+3
STOATT	+5	+1	+9	+4	+4	0	4	+3	+4	+5	4	0
STOPOS	+5	-1	0	+2	+4	0	-1	+3	+6	+1	+3	0
STOPLA	+6	0	+1	+3	+4	+1	+4	+1	+1	+6	+5	-3
STONEG	-1	0	0	0	0	0	0	0	+3	0	-2	0
STOWIT	0	0	-1	0	0	0	0	0	+1	0	0	0
SOBNON	0	0	-1	+2	-5	-3	+4	0	-3	+2	+3	0
SOBNOC	0	+4	-2	0	+4	-2	0	+2	+5	-3	-5	-1
SOBTOU	-2	+7	-2	-7	-2	+1	-6	-7	-8	-7	-5	-2
SOBREA	+1	-5	+7	0	+7	+3	+4	+2	+6	+3	+7	+2
SOBOFF	+3	0	+9	0	0	0	0	0	-2	0	-1	0
SOBACC	+4	0	0	0	0	+3	-2	-5	-3	+4	0	+6
SPLAPP	0	-5	+2	-5	+1	+6	-2	-1	+3	+4	+6	-2
SPLINA	0	0	0	0	0	-2	0	0	+4	0	0	0
SPLPAR	0	-4	+4	0	+2	+7	-3	+2	+6	+2	+3	-3
SPLCOO	0	0	-1	-5	-1	0	+1	-3	-2	+3	+5	-2
SPLINT	0	0	0	0	0	0	0	0	0	0	0	-1
SVONON	-3	+4	+3	+1	-4	-1	-1	-4	-1	+1	-2	-4
SVOSND	+2	-4	-3	-1	+5	-1	-2	+5	-1	-2	+2	+6
SVONDI	-2	0	0	0	0	+5	0	0	-2	0	0	-2
SVODIR	+3	0	+1	0	0	0	+5	-7	-2	-2	-2	0
SVOREP	0	0	0	0	0	0	0	0	0	0	0	0
SVOHUM	0	0	0	0	0	0	0	0	0	-2	0	0
SVOLAU	0	0	0	-4	-2	-2	0	-5	+1	+1	+2	+2
SVOWHI	-1	-3	0	0	0	-1	-1	+2	0	0	+1	-4
SVOPRO	+1	3	-1	0	0	-3	-2	+1	+4	+1	+1	-2
SAMPLE n	22	14	13	18	17	14	39	19	52	44	37	8
SIG CORR>	42	53	55	47	48	53	32	46	27	30	32	71

note: correlations rounded to one decimal place and multiplied by ten

Table 11

Standard Deviation Differences for Peer-Teacher for NON Behaviors

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
NORSPE	27	14	24	20	28	17	14	16	24	19	25	22
NOROBJ	29	29	25	30	29	25	35	28	40	30	33	37
NORAWA	26	19	17	23	23	17	28	16	25	19	22	24
NAFNEU	15	18	12	13	16	11	21	16	16	18	28	23
NAFPOS	16	20	11	14	16	12	20	18	15	18	33	31
NAFNEG	0	0	0	0	0	1	0	1	0	0	0	2
NAFDIS	0	0	0	0	0	0	0	0	0	0	0	0
NPOCLO	12	7	7	7	22	13	10	9	18	11	22	24
NPOFAR	13	8	13	7	20	8	10	11	14	12	23	24
NPOFRO	29	38	33	42	36	35	35	35	43	32	24	4
NPOSID	29	22	32	38	32	27	39	32	38	28	35	23
NPOBEH	40	32	5	12	21	22	33	17	31	16	10	5
NPOMOV	40	29	18	29	34	27	34	16	25	16	11	9
NTONON	27	26	19	25	30	24	21	23	18	23	27	22
NTOACC	17	23	6	10	23	22	9	13	13	12	11	7
NTOATT	8	12	8	14	2	11	8	11	8	16	0	9
NTOCOM	6	10	5	1	5	2	2	4	2	4	3	0
NTOGUI	14	31	9	18	23	30	16	28	10	27	31	24
NTOPOS	1	2	3	4	0	8	16	6	2	4	3	4
NTONEG	0	0	0	1	0	1	0	0	0	0	0	0
NOBNON	42	34	0	33	27	13	45	34	38	23	10	7
NOBNOC	23	26	35	27	36	17	29	22	22	31	20	19
NOBDEM	34	32	33	32	29	21	35	29	37	32	28	12
NOBOFF	11	23	0	21	8	12	18	17	19	21	7	22
NOBACC	2	5	0	0	0	8	0	3	0	5	0	0
NOBADJ	8	21	9	6	22	20	10	13	5	17	39	36
NPLAPP	36	35	35	34	36	32	38	33	39	34	30	38
NPLINA	0	0	0	0	4	1	0	0	0	0	3	0
NPLPAR	22	20	34	19	30	26	21	24	36	22	27	0
NPLCOO	30	34	16	23	21	25	36	26	24	20	35	18
NPLINT	0	0	0	0	0	0	0	0	0	0	5	27
NVONON	24	11	28	11	32	13	20	15	31	18	17	15
NVOATT	15	20	4	7	21	24	11	17	8	19	4	15
NVOSPE	30	29	41	47	19	21	17	21	28	21	23	8
NVOAPP	11	19	11	20	3	16	11	15	4	12	6	23
NVODIS	1	3	0	1	2	4	0	2	2	1	0	0
NVOQUE	15	19	7	11	6	7	10	8	8	8	0	2
NVOADU	8	10	13	16	7	7	15	18	11	15	16	26
NVOPEE	10	6	7	0	6	4	9	4	3	2	20	5
NVOTAL	1	2	0	0	0	0	0	2	2	1	5	0
NVOOTH	0	0	0	0	0	0	0	2	0	0	0	0
NVOSIN	10	3	0	4	1	12	1	5	9	8	0	0
NVOLAU	1	1	5	2	1	1	2	1	4	1	2	0

Table 12

Peer-Teacher Mean Percents for Joint & Master Behaviors

SPED #	11		18		23		25		26		69	
	P	T	P	T	P	T	P	T	P	T	P	T
JOROTH	13	12	32	19	6	13	16	36	13	15	5	4
JOROBJ	11	28	54	44	14	46	28	14	39	21	17	27
JAFPOS	3	5	1	3	4	1	4	2	2	2	1	0
JOBUSE	14	27	34	31	8	31	20	27	12	15	34	34
MORIEN	31	58	81	71	30	71	51	59	59	58	26	48
MINTEN	29	58	74	76	51	71	40	56	21	45	43	60
MPLAY	27	47	67	51	33	39	35	29	21	21	57	13
SAMPLE n	23	61	24	21	14	84	21	63	22	50	15	9

KEY:

JOROTH	SPED and NON oriented to each other
JOROBJ	SPED and NON oriented to the object
JAFPOS	SPED and NON have positive affect
JOBUSE	SPED and NON both use objects
MORIEN	SPED oriented to either NON or objects
MINTEN	SPED intentional behavior (purposeful, play maintain contact,reaches, offers, accepts, interactive play, touch for attention)
MPLAY	SPED plays (parallel, cooperative or interactive)

note:significant p<.05 differences underlined

Table 13

Correlations with Time: Joint & Master Behaviors

	Peer with SPED #						Teacher with SPED #					
Behavior	11	18	23	25	26	69	11	18	23	25	26	69
JOROTH	0	-4	-2	-3	-1	+3	+1	+1	+3	+3	+2	-2
JOROBJ	+1	-1	+8	-2	+6	+6	+1	0	+2	+2	+4	+1
JAFPOS	-3	-3	-1	-5	-3	-3	-1	-3	0	-3	-1	0
JOBUSE	+1	0	+8	0	+7	+4	+2	0	+5	+5	+5	+2
MORIEN	+1	-4	+5	-2	+5	+6	-3	-2	0	-1	+2	+5
MINTEN	+3	-4	+2	+3	+7	+3	+5	0	0	+8	+6	+3
MPLAY	0	-5	+2	-5	+1	+6	-2	-1	+4	+4	+6	-3
SAMPLEn	22	14	13	18	17	14	39	19	52	44	37	8
SIG COR>	42	53	55	47	48	53	32	46	27	30	32	71

note: correlations rounded to one decimal place. decimal omitted.

VERSION 8/19/81

SIOS:
SOCIAL INTERACTION OBSERVATION SYSTEM

by

Luanna Voeltz, Gloria Kishi, and Jerry Brennan

University of Hawaii

August 1981

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Hawaii Integration Project

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TM

COMPLETE THIS SECTION BEFORE THE OBSERVATION:

OBSER. CODE	SCHOOL CODE	TODAY'S DATE MO	DAY	YEAR	SPED ID NUMBER	1 NONSPED ID NUMBER	1 NONSPED TYPE	2 NONSPED ID NUMBER	2 NONSPED TYPE	OTHERS W/SPED
				198						
⓪⓪	⓪⓪	⓪⓪	⓪⓪	⓪	⓪⓪⓪	⓪⓪⓪	○ Peer	⓪⓪⓪	○ Peer	⓪
①①	①①	①①	①①	①	①①①	①①①	○ Teacher	①①①	○ Teacher	①
②②	②②	②	②②	②	②②②	②②②	○ Adult	②②②	○ Adult	②
③③	③③	③	③③	③	③③③	③③③		③③③		③
④④	④④	④	④	④	④④④	④④④		④④④		④
⑤⑤	⑤⑤	⑤	⑤	⑤	⑤⑤⑤	⑤⑤⑤		⑤⑤⑤		⑤
⑥⑥	⑥⑥	⑥	⑥	⑥	⑥⑥⑥	⑥⑥⑥		⑥⑥⑥		
⑦⑦	⑦⑦	⑦	⑦	⑦	⑦⑦⑦	⑦⑦⑦		⑦⑦⑦		
⑧⑧	⑧⑧	⑧	⑧	⑧	⑧⑧⑧	⑧⑧⑧		⑧⑧⑧		
⑨⑨	⑨⑨	⑨	⑨	⑨	⑨⑨⑨	⑨⑨⑨		⑨⑨⑨		

PERSONNEL IN ROOM: SPED	NON	ADULT	SPECIAL CONDITIONS	CRITICAL INCIDENT	TIME SAMPLING INTERVAL	TYPE OF OBSERVATION
⓪⓪	⓪⓪	⓪⓪	○ New room	○ Sick	① 7.5/7.5	① Primary
①①	①①	①①	○ Rearrange	○ Seizure	② 10/10	② Reliability
②②	②②	②②	○ New teacher	○ No sleep	③	③ Video Tape
③③	③③	③③	○ New material	○ New prosthes.	④	④ Practice in vivo
④④	④④	④④	○ Food present	○ Home change		
⑤⑤	⑤⑤	⑤⑤	○ New pupil	○ Medication		
⑥⑥	⑥⑥	⑥⑥	○	○		
⑦⑦	⑦⑦	⑦⑦	○	○		
⑧⑧	⑧⑧	⑧⑧				
⑨⑨	⑨⑨	⑨⑨				

DO NOT WRITE IN THIS SPACE

COMPLETE THIS SECTION WHEN OBSERVATION IS ABOUT TO BEGIN:

	HOUR	MINUTE	
TIME OF BELL	⑦⑧⑨⑩⑪⑫ ①②③④⑤	⓪①② ③④⑤	⓪①②③④ ⑤⑥⑦⑧⑨
TIME ENTER ROOM	⑦⑧⑨⑩⑪⑫ ①②③④⑤	⓪①② ③④⑤	⓪①②③④ ⑤⑥⑦⑧⑨
TIME OF GREETING	⑦⑧⑨⑩⑪⑫ ①②③④⑤	⓪①② ③④⑤	⓪①②③④ ⑤⑥⑦⑧⑨

GREETING

- ○ No greeting
- ○ Verbal
- ○ Touch
- ○ Other nonverbal
- ○ Eye contact
- ○ SPED response
- ○

COMPLETE THIS SECTION AFTER OBSERVATION:

SPED AROUSAL

	LOW	AVG	HIGH
PRIOR	①	②	③
DURING	①	②	③
AFTER	①	②	③

EYE LEVEL OF NON

- ○ Above SPED eye level
- ○ At SPED eye level
- ○ Below SPED eye level

COMMENTS ○ No ○ Yes	DESCRIBE ACTIVITIES
	BEST COPY AVAILABLE

NON

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ One
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Two
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Other

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Inside
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Outside

ACTIVITY

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Moving
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Toys
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Music
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Caregive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Instruct
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Watch
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Play, etc.

DO NOT WRITE IN THIS SPACE

NON—NONHANDICAPPED

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪

ORIENTATION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to object
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient away/none

AFFECT

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Neutral
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Distress

POSITION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Close to SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Far from SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Front of SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Side of SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Behind SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Movement

TOUCH PERSON

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accidental/Neut.
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Attention seek
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comforts
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Guide/Position
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative

OBJECTS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ No contact
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Demonstrates
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Offers
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accepts
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Adjusts

PLAY

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Appropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Inappropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Parallel Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Cooperative Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Interactive Play

VOCALIZATIONS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Attention/Neutral
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comment to SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Approval
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Disapproval
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Question

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comment/Q adult
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comment/Q peer
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Talks about
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Neg. comment other
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Singing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Laughing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ INTRUSION

SPED—HANDICAPPED

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪

ORIENTATION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to NON
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to object
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient away
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Non-orientation

AFFECT

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Neutral
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Distress

POSITION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Passive recline
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Active recline
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Passive movement
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Non-purpose move
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Purposeful move

TOUCH PERSON

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accidental/Neut.
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Attention seek
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Play/Maintain
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Withdrawal

OBJECTS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ No contact
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Touches
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Reaches
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Offers
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accepts

PLAY

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Appropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Inappropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Parallel Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Cooperative Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Interactive Play

VOCALIZATIONS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Nonlanguage snds.
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Spon. nondirect
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Spon. directed
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Repeats
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Hum, sing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Laughing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Whimpers, cries
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Protest, angry

INDIVIDUAL TARG.

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ INTRUSION

BEST COPY AVAIL

NON

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ One
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Two
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Other

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Inside
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Outside

ACTIVITY

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Moving
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Toys
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Music
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Caregive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Instruct
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Watch
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Play, etc.

NON–NONHANDICAPPED

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ **ORIENTATION**
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to object
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient away/none

AFFECT

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Neutral
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Distress

POSITION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Close to SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Far from SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Front of SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Side of SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Behind SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Movement

TOUCH PERSON

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accidental/Neut.
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Attention seek
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comforts
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Guide/Position
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative

OBJECTS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ No contact
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Demonstrates
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Offers
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accepts
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Adjusts

PLAY

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Appropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Inappropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Parallel Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Cooperative Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Interactive Play

VOCALIZATIONS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Attention/Neutral
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comment to SPED
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Approval
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Disapproval
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Question

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comment/Q adult
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Comment/Q peer
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Talks about
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Neg. comment other
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Singing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Laughing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ INTRUSION

SPED–HANDICAPPED

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ **ORIENTATION**
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to NON
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient to object
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Orient away
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Non-orientation

AFFECT

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Neutral
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Distress

POSITION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Passive recline
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Active recline
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Passive movement
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Non-purpose move
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Purposeful move

TOUCH PERSON

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accidental/Neut.
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Attention seek
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Positive
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Play/Maintain
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Negative
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Withdrawal

OBJECTS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ No contact
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Touches
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Reaches
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Offers
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Accepts

PLAY

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Appropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Inappropriate
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Parallel Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Cooperative Play
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Interactive Play

VOCALIZATIONS

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ None
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Nonlanguage snds
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Spon. nondirect
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Spon. directed
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Repeats
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Hum, sing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Laughing
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Whimpers, cries
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ Protest, angry

INDIVIDUAL TARG.

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ INTRUSION

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